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SENATE
ECONOMICS LEGISLATION COMMITTEE

Thursday, 24 October 2019

Members in attendance: Senators Bragg, Brockman, Gallacher, Green, Hanson, Keneally, McAllister, McDonald, McMahon, Patrick, Pratt, Roberts, Sinodinos, Marielle Smith, Walsh.
TREASURY PORTFOLIO

In Attendance

Senator Cormann, Minister for Finance
Senator Seselja, Assistant Minister for Finance, Charities and Electoral Matters
Senator Hume, Assistant Minister for Superannuation, Financial Services and Financial Technology

Department of the Treasury

Dr Steven Kennedy, Secretary
Mr Damien White, Chief Adviser, National Security Team

Macroeconomic Group

Ms Meghan Quinn, Deputy Secretary, Macroeconomic Group
Ms Victoria Anderson, Executive Director, Centre for Population
Mr Merrick Peisley, Principal Adviser, Centre for Population
Ms Laura Berger-Thomson, Acting Division Head, Macroeconomic Conditions Division
Mr Ray Harris, Senior Analyst, Macroeconomic Conditions Division
Ms Lisa Elliston, Division Head, International Policy and Engagement Division
Mr Jim Hagan, Chief Adviser, International Policy and Engagement Division
Mr Christopher Legg, Chief Adviser, International Policy and Engagement Division
Ms Riki Polygenis, Principal Adviser, International Policy and Engagement Division
Mr Ian Beckett, Acting Division Head, Macroeconomic Modelling and Policy Division
Mr Dan Andrews, Chief Adviser, Macroeconomic Modelling and Policy Division
Mr Michael Kouparitsas, Principal Adviser, Macroeconomic Modelling and Policy Division
Mr Damian Mullaly, Principal Adviser, Macroeconomic Modelling and Policy Division

Corporate Services and Business Strategy Group

Mr Matt Flavel, Deputy Secretary, Corporate Services and Business Strategy Group
Mr Robert Twomey, Chief Financial Officer, Chief Financial Officer Division
Mr Mike Webb, Chief Information Officer, Information Services Division
Ms Cristy England, Division Head, People and Organisational Strategy Division
Ms Melanie Moore, Acting Division Head, Communication and Parliamentary Division

Fiscal Group

Mr Simon Atkinson, Deputy Secretary, Fiscal Group
Mr Robert Jeremenko, Division Head, Retirement Income Policy Division
Mr Darren Kennedy, Principal Adviser, Retirement Income Policy Division
Mr Robb Preston, Principal Adviser, Retirement Income Policy Division

ECONOMICS LEGISLATION COMMITTEE
Ms Michelle Dowdell, Principal Adviser, Retirement Income Policy Division
Ms Nicole Mitchell, Acting Principal Adviser, Retirement Income Policy Division
Mr Jonathan Rollings, Division Head, Budget Policy Division
Mr Adam McKissack, Principal Adviser, Budget Policy Division
Ms Vicki Wilkinson, Division Head, Social Policy Division
Ms Joanne Evans, Principal Adviser, Social Policy Division
Ms Philippa Brown, Principal Adviser, Social Policy Division
Mr Mark Cully, Head, Deregulation Taskforce
Ms Kate Phipps, Division Head, Commonwealth-State Relations Division
Mr Peter Johnson, Principal Adviser, Commonwealth-State Relations Division
Mr Damien Dunn, Acting Division Head, Structural Reform Division
Ms Lucy Vincent, Principal Adviser, Structural Reform Division
Ms Marianne Dolman, Principal Adviser, Structural Reform Division
Ms Trudie Wykes, Senior Adviser, Structural Reform Division

**Revenue Group**
Mr Graeme Davis, Division Head, Tax Framework Division, Revenue Group
Ms Maryanne Mrakovcic, Deputy Secretary, Executive, Revenue Group
Mr Simon Writer, Division Head, Law Design Office, Revenue Group
Ms Marisa Purvis-Smith, Division Head, Individuals and Indirect Tax Division, Revenue Group
Mr Paul McCullough, Division Head, Corporate and International Tax Division, Revenue Group
Ms Kathryn Davy, Principal Adviser, Corporate and International Tax Division, Revenue Group
Mr Geoff Francis, Principal Adviser, Corporate and International Tax Division, Revenue Group
Mr Patrick Boneham, Division Head, Black Economy Division, Revenue Group
Mr Matthew Brine, Division Head, Tax Analysis Division, Revenue Group

**Markets Group**
Mr Paul Verschuer, Deputy Secretary, Markets Group
Ms Diane Brown, Division Head, Financial System Division
Mr Warren Tease, Chief Adviser, Financial System Division
Ms Nghi Luu, Principal Adviser, Financial System Division
Mr James Kelly, Chief Adviser, Financial Services Reform Implementation Taskforce
Ms Mohita Zaheed, Principal Adviser, Financial Services Reform Implementation Taskforce
Ms Neena Pai, Principal Adviser, Financial Services Reform Implementation Taskforce
Ms Christine Barron, Division Head, Consumer and Corporations Policy Division
Ms Kate O'Rourke, Principal Adviser, Consumer and Corporations Policy Division
Ms Kate Lynch, Principal Adviser, Consumer and Corporations Policy Division
Mr Roger Brake, Division Head, Foreign Investment Division
Ms Kerstin Wijeyewardene, Principal Adviser, Foreign Investment Division
Mr Tim Baird, Principal Adviser, Foreign Investment Division
Mr Andrew Deitz, Principal Adviser, Foreign Investment Division
Mr Jared Henry, Acting Principal Adviser, Foreign Investment Division

**Australian Bureau of Statistics**
Mr David W. Kalisch, Australian Statistician
Ms Jenet Connell, Deputy Australian Statistician and Chief Operating Officer, Corporate Services and Transformation Group
Ms Teresa Dickinson, Deputy Australian Statistician, Census and Data Services Group
Ms Luise McCulloch, Deputy Australian Statistician, Statistical Services Group
Dr Paul Jelfs, General Manager, Population and Social Statistics Division
Mr John Shepherd, General Manager, Industry Statistics Division
Dr Anders Holmberg, General Manager and Chief Methodologist, Methodology Division
Mr Chris Libreri, General Manager, Census Division
Mr Marcel van Kints, General Manager, Statistical Data Integration Division
Mr Steve Hamilton, General Manager and Chief Information Officer, Technology and Security Division
Ms Lily Viertmann, General Manager, Chief Finance Officer and Chief Risk Officer, Finance, Risk and Planning Division
Mr Bjorn Jarvis, Program Manager, Macroeconomic Statistics Division

**Australian Competition and Consumer Commission**
Mr Rod Sims, Chair
Ms Rayne de Gruchy, Chief Operating Officer
Mr Scott Gregson, Executive General Manager, Merger and Authorisation Review Division
Mr Rami Greiss, Executive General Manager, Enforcement Division
Mr Tim Grimwade, Executive General Manager, Consumer, Small Business and Product Safety Division
Mr Michael Cosgrave, Executive General Manager, Infrastructure Regulation Division
Mr Marcus Bezzi, Executive General Manager, Specialised Enforcement and Advocacy Division

**Australian Energy Regulator**
Ms Michelle Groves, Chief Executive Officer
Mr Peter Adams, General Manager, Market Performance

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ECONOMICS LEGISLATION COMMITTEE
Mr Mark Feather, General Manager, Policy and Performance
Mr Sebastian Roberts, General Manager, Transmission and Gas
Ms Jacqueline Thorpe, General Manager, Compliance and Enforcement

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Ms Danielle Press, Commissioner
Mr Sean Hughes, Commissioner
Mr Warren Day, Executive Director, Assessment and Intelligence

**Australian Taxation Office**
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Ms Jacqui Curtis, Chief Operating Officer
Mr Andrew Mills, Second Commissioner, Law Design and Practice
Mr Jeremy Hirschhorn, Second Commissioner, Client Engagement Group
Mr Ramez Kaf, Chief Information Officer, Enterprise Solution and Technology
Ms Melinda Smith, Chief Service Delivery Officer, Service Delivery Group
Ms Janine Bristow, Acting Chief Finance Officer
Mr Brad Chapman, Deputy Commissioner, ATO People
Mr James O'Halloran, Deputy Commissioner, Superannuation
Mr Jeremy Geale, Deputy Commissioner, Review and Dispute Resolution
Ms Sue Sinclair, Deputy Commissioner, ATO Corporate
Mr Jonathan Todd, ATO General Counsel, ATO Corporate

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ECONOMICS LEGISLATION COMMITTEE
CHAIR (Senator Brockman): I declare open this meeting of the Senate Economics Legislation Committee. The committee will continue its examination of the Treasury portfolio, commencing with questions for the Australian Competition and Consumer Commission and the Australian Energy Regulator. The hearing will then follow the order as set out in the circulated program. The committee has set 31 October 2019 as the date by which senators are to submit written questions on notice and 12 December 2019 as the date for the return of answers to questions taken on notice. Under standing order 26, the committee must take all evidence in public session. This includes answers to questions on notice. Officers and senators are familiar with the rules of the Senate governing estimates hearings. If you need assistance, the secretariat has a copy of the rules. In particular I draw the attention of witnesses to an order of the Senate of 13 May 2009, specifying the process by which a claim of public interest immunity should be raised and which I now incorporate into Hansard.

The extract read as follows—

Public interest immunity claims
That the Senate—

(a) notes that ministers and officers have continued to refuse to provide information to Senate committees without properly raising claims of public interest immunity as required by past resolutions of the Senate;
(b) reaffirms the principles of past resolutions of the Senate by this order, to provide ministers and officers with guidance as to the proper process for raising public interest immunity claims and to consolidate those past resolutions of the Senate;

(c) orders that the following operate as an order of continuing effect:

(1) If:

(a) a Senate committee, or a senator in the course of proceedings of a committee, requests information or a document from a Commonwealth department or agency; and

(b) an officer of the department or agency to whom the request is directed believes that it may not be in the public interest to disclose the information or document to the committee, the officer shall state to the committee the ground on which the officer believes that it may not be in the public interest to disclose the information or document to the committee, and specify the harm to the public interest that could result from the disclosure of the information or document.

(2) If, after receiving the officer’s statement under paragraph (1), the committee or the senator requests the officer to refer the question of the disclosure of the information or document to a responsible minister, the officer shall refer that question to the minister.

(3) If a minister, on a reference by an officer under paragraph (2), concludes that it would not be in the public interest to disclose the information or document to the committee, the minister shall provide to the committee a statement of the ground for that conclusion, specifying the harm to the public interest that could result from the disclosure of the information or document.

(4) A minister, in a statement under paragraph (3), shall indicate whether the harm to the public interest that could result from the disclosure of the information or document to the committee could result only from the publication of the information or document by the committee, or could result, equally or in part, from the disclosure of the information or document to the committee as in camera evidence.

(5) If, after considering a statement by a minister provided under paragraph (3), the committee concludes that the statement does not sufficiently justify the withholding of the information or document from the committee, the committee shall report the matter to the Senate.

(6) A decision by a committee not to report a matter to the Senate under paragraph (5) does not prevent a senator from raising the matter in the Senate in accordance with other procedures of the Senate.

(7) A statement that information or a document is not published, or is confidential, or consists of advice to, or internal deliberations of, government, in the absence of specification of the harm to the public interest that could result from the disclosure of the information or document, is not a statement that meets the requirements of paragraph (1) or (4).

(8) If a minister concludes that a statement under paragraph (3) should more appropriately be made by the head of an agency, by reason of the independence of that agency from ministerial direction or control, the minister shall inform the committee of that conclusion and the reason for that conclusion, and shall refer the matter to the head of the agency, who shall then be required to provide a statement in accordance with paragraph (3).

(d) requires the Procedure Committee to review the operation of this order and report to the Senate by 20 August 2009.

(13 May 2009 J.1941)

(Extract, Senate Standing Orders)

Witnesses are specifically reminded that a statement that information or a document is confidential or consists of advice to government is not a statement that meets the requirements of the 2009 order. Instead, witnesses are required to provide some specific indication of the
harm to the public interest that could result from the disclosure of the information or document.

I ask members of the media to follow the established media guidelines and the instructions of the committee secretariat. As set out in the guidelines, senators' and witnesses' laptops, mobile phones, other devices and personal papers are not to be filmed. I remind senators and witnesses that microphones remain live unless I instruct otherwise, for example at a suspension or adjournment. I remind members of the public and anyone in the gallery that they are not permitted to speak or interfere with the proceedings or with witnesses at any point during the hearing. Security is present and will be asked to remove anyone who does not follow these instructions.

Australian Competition and Consumer Commission
Australian Energy Regulator

[09:03]

CHAIR: I now welcome the Assistant Minister for Superannuation, Financial Services and Financial Technology, Senator the Hon. Jane Hume, representing the Treasurer, and officers of the ACCC and the Australian Energy Regulator. Minister or Mr Sims, do either of you wish to make an opening statement?

Senator Hume: I have no opening statement for you, Chair.

Mr Sims: No. We're happy to take questions and maximise the time for that, thank you.

CHAIR: Excellent. Very good, Mr Sims. Thank you. We'll go straight to questions.

Senator GALLACHER: I've got some brief questions for the Australian Energy Regulator. Can someone from the regulator describe the consultation strategy that you have with respect to your stakeholders? Do you have a strategy about how you engage with people in the sector?

Ms Groves: We do.

Senator GALLACHER: Is it published?

Ms Groves: The AER does have a published approach to engagement with stakeholders in the general. For all of our processes we will set out our process and our engagement methods for the particular types of processes that we're conducting. In general we run fairly public processes. We seek to engage broadly with our stakeholders through a range of techniques—written submissions, commentary on issues papers and draft determinations, public forums and, at times, quite bespoke workshops, symposiums et cetera when needed for particular matters.

Senator GALLACHER: Do you have engagement with the representatives of workers in the sector?

Ms Groves: We do, through specific processes. At times we've dealt with submissions from individual workers as well as through their representatives—unions, for example.

Senator GALLACHER: How would you characterise your consultation or relationship mechanisms with the ETU, CFMMEU and ASU? Do you meet with them on a regular basis to chat about what's happening in the sector, or is it ad hoc?
Ms Groves: We meet with stakeholders as requested or as part of public forums. We have recently met, for example, with the ETU. We spent significant amounts of time talking about our processes and our framework for working and explaining some aspects of the regulatory framework under which we operate. They were very keen to become engaged more specifically with individual processes, and we said we would ensure that they were included in our consultation and participation processes.

Senator GALLACHER: Considering the significant regulatory reforms occurring in the National Electricity Market, could you take on notice how many meetings in the last 12 or 18 months you've had with workers' representatives about those regulatory reforms and other matters.

Ms Groves: Certainly. What we'll do is include meetings and perhaps other forms of engagement, because a lot of our engagement is often done through submissions or letters as well.

Senator GALLACHER: How many secondments to the Australian Energy Regulator have occurred in the past 12 month from companies that you regulate?

Ms Groves: Off the top of my head, I would say none. But I would need to check that. It's not something that we do as a matter of course. We don't tend to do secondments from companies that we regulate. Most of our secondments are done between other regulators, either domestically or internationally.

Senator GALLACHER: So you have a program of bringing people from other regulators in to experience how your operation governs itself and operates?

Ms Groves: At times we second people in. That can be for a variety of reasons—either for a staff development reason, from another regulator, or because we might need particular expertise that another regulator might be able to provide to us through a secondment opportunity. At times we do second our staff to other regulators to give them broader exposure to different regulatory frameworks.

Senator GALLACHER: Can you take it on notice and double-check that you haven't had secondments from companies you regulate.

Ms Groves: I certainly will confirm that.

Senator GALLACHER: Would it be possible to get a schedule of the meetings the regulator had with the minister prior to the tabling of the 'big stick' energy laws in parliament—how many times you met with the minister to develop that?

Ms Groves: We can certainly provide a list of the times that we have met with—I'm assuming you mean the minister for energy?

Senator GALLACHER: Yes.

Ms Groves: We can certainly provide that, yes.

Senator GALLACHER: So you haven't met with him about the new legislation?

Ms Groves: To my understanding, not specifically. We do meet with the minister on a range of things. He's a member of COAG, and we work with all COAG energy ministers as well as with the Commonwealth minister. The AER has not been involved in the development of the 'big stick' legislation, and I am not aware of any meetings. But, once again, I'll confirm that for you.
Senator GALLACHER: Thank you very much. That's very forthcoming.

Senator GREEN: I'd like to ask some questions about the ACCC's inquiry into insurance in northern Australia. I want to start off by thanking the ACCC for the very detailed work that you've done in this space, including some significant consulting with the community. I want to put on record: thank you very much for that work.

Mr Sims: Thank you.

Senator GREEN: In terms of the government's response to the inquiry, the ACCC published its first interim report in December 2018. That report made 15 recommendations to improve the insurance market in northern Australia. Has the government accepted any of those recommendations?

Mr Cosgrave: There has not been a specific government response to that report.

Senator GREEN: When will the government announce its response to those recommendations?

Senator Hume: That's probably a question for the government rather than the agency.

Senator GREEN: Would you like to answer that, Minister?

Senator Hume: I can tell you that the government is considering it's response and will respond in due course.

Senator GREEN: Has the department provided any advice to the minister on these recommendations?

Mr Sims: That's not our role to understand. What advice the department has provided is an issue for the department.

Mr Cosgrave: It's a report to the Treasurer, so the Treasury is the relevant policy agency.

Senator GREEN: And the ACCC's inquiry released its second update report in July 2019, and that report made a further 13 recommendations. I'm assuming the answer is the same, but has the government accepted any of those recommendations? If not, when will the government announce its response to those recommendations?

Senator Hume: I think I can safely say again that the government will respond in due course.

Senator GREEN: Has the government consulted with any stakeholders on home contents and strata insurance in North Queensland? And, if so, who have you consulted with?

Senator Hume: I'll have to take that on notice.

Senator GREEN: You'll take that on notice?

Mr Sims: Yes. We've consulted a lot, but the government—I don't know.

Senator GREEN: I understand the extensive amount the ACCC has consulted. I'm wondering, in response to the 28 recommendations that you've made, whether the government has gone and done any work on those recommendations?

Senator Hume: I couldn't answer that for you. I can take it on notice.

Senator GREEN: In the summary of the first update report, the ACCC states:

We urge governments and industry to take quick action on our 15 recommendations. Some of them have been made a number of times before.
Then, in the executive summary of the second update report, they state:

We again urge governments and industry to act quickly on all 28 recommendations that we have now made as part of this inquiry.

Minister, can you tell me why the government hasn't acted quickly on any of the 28 recommendations contained in the two reports when the ACCC has been very explicit in urging urgent action?

Senator Hume: I can safely say to you that the issues are complex, that there are many stakeholders that need to be consulted and that the government will respond in due course.

Senator GREEN: You can't give any time lines around that? This is pretty explicit around acting urgently.

Senator Hume: I can't give you a more fulsome answer than that.

Senator GREEN: In February this year, the Deputy Premier of Queensland wrote to Minister Frydenberg, seeking urgent action to address insurance related issues faced by residents and businesses in Townsville. Why hasn't the Treasurer responded to the deputy premier's letter? When will the Treasurer respond to this letter?

Senator Hume: I can't answer that for you here, but I can take that on notice.

Senator GREEN: You're taking that on notice too?

Minister, as far back as 2015, members of your government have called the insurance situation in northern Australia a crisis. They've also told voters in North Queensland that they would fix this crisis. Given the lack of action from the government, despite the ACCC urging quick action, it's clear to me that either one of two things are happening here. Either those MPs are failing to raise the concerns with you about how important this is to businesses or households who are about to face another cyclone season or the government is choosing to ignore the concerns of those MPs. Which one is it?

Senator Hume: I don't think that's a reasonable question. I think that's your assertion and not the government's.

Senator GREEN: Do you have another explanation?

Senator Hume: I think I can take the issue on notice and discuss it with the Assistant Treasurer. He can give you an appropriate response.

Senator GREEN: Thank you. That's all I have.

Senator McDONALD: Just following on from Senator Green's question with regard to the ACCC inquiry into northern Australian insurance, I note that a number of the recommendations were relevant to the Queensland state government, particularly around the removal of stamp duty on insurance premiums and the levying of stamp duty on the value of the sum insured as opposed to the premium amount. Has the Queensland state government provided any advice to you on if and when they'll be taking action on something that would immediately reduce premiums in North Australia or North Queensland?

Mr Cosgrave: I'm not aware of that recommendation related to the governments of Queensland, Western Australia or the Northern Territory and I'm not aware of responses from any of those governments to that recommendation.
Senator McDonald: There was a very specific recommendation in relation to stamp duty, which would immediately relieve North Queenslanders of approximately nine per cent, plus the impact of GST, so I think that would be very relevant.

My questions are also in relation to the ACCC. I notice the inquiry in relation to water trading is underway. How many complaints has the ACCC received in relation to water market trading—that is, the total number pre-inquiry and since the inquiry started?

Mr Sims: I'll pass that one to Mr Bezzi.

Mr Bezzi: I'm not sure that I can answer that. I don't have those figures with me. I think we'll have to take that on notice.

Senator McDonald: When you do that, would you be able to break that number down by state as well please?

Mr Bezzi: Certainly.

Senator McDonald: Thank you. I note you're undertaking regional roadshows. Could you please provide me with some details on what the communication strategy for ensuring stakeholders know about the forums will be and how many registrations you've received for each location to date. Of course I'm happy for you to take that on notice.

Mr Bezzi: We've engaged with a whole lot of stakeholders that are registered through various consultation mechanisms that we have in place already. We've engaged with local media in the regional areas. There's a process for registering on our website to attend the forums, and we encourage anyone to register. It's given prominence on the front of our website, if you go to our web page. I don't think registrations have closed yet but I can certainly, on notice, give you the number of people who've registered.

Senator McDonald: That would be terrific. I know the issues paper was only released last Thursday. How many submissions have you received so far?

Mr Bezzi: I don't believe we've received any yet.

Senator McDonald: What powers does the ACCC have to address potential misuse of market power in the water market?

Mr Sims: Marcus, I'll pass that one to you.

Mr Bezzi: We have a general power, under the Competition and Consumer Act, to investigate alleged misuse of market power. That's under section 46 of the Competition and Consumer Act. There are also specific regulatory arrangements with respect to particular water markets. Mostly water markets are regulated at a state level, by states. But our general rules about misuse of market power apply to any participants in water-trading markets.

Senator McDonald: I refer to the article 'Price of water soars as farmers buy in panic' in The Australian this morning. I'm happy to table that if it's useful to the committee. My specific concern is that this document talks about it being not because of the lack of available water but—

Chair: Senator McDonald, could we get some copies of that please.

Senator McDonald: because of the market being monopolised and the price being driven up. Is that something you'd be able to specifically examine as a matter of urgency in this inquiry?
Mr Sims: It's certainly something that will be looked at as part of the inquiry. But the misuse of market power is distinguished from the use of market power. If somebody gains market power and the ability to push up prices, that's not a misuse of market power. The way the section is worded is the bane of my life, but the misuse of market power is where you're doing something to damage a competitor. How the market's working and whether it has too many opportunities to allow the use of market power is something the inquiry is going to look at. Certainly, if we found any evidence of a misuse of market power in terms of damaging competitors in the market, we would be all over that. Simply seeing high prices doesn't give evidence of a misuse. It could well give evidence of a use of market power. In fact, if you've got a very thin water market and people get the ability to push up prices, that's exactly what the water inquiry is meant to look at.

Senator McDONALD: I really appreciate you explaining that difference, because I think that, particularly around food production and with water being such an important commodity, it is good to understand that distinction, and it goes back to my point about what powers the ACCC has in which markets. Thank you. I also want to ask about what powers the ACCC has in other sections of the agrifood supply chain—specifically in relation to retailers and bargaining powers.

Mr Sims: I'll let Mr Bezzi add something as well. We've done inquiries now into dairy, horticulture and beef, and the issue that we've come across a lot is the imbalance in bargaining power between the farmers and the processors. Certainly in the case of dairy, which is a good example, we recommended that a code be put in place to increase the bargaining power. Dairy, I think, is an interesting sector. In our dairy inquiry we looked at all the contracts between the processors and the supermarkets. I think I'm right in saying that most of them had a clause that said that, if the processors needed to pay the farmers more to get their milk, that higher price of milk would be a straight flow through to the retailers. So our view from the dairy inquiry was that the problem was the imbalance of bargaining power between the dairy farmers and the processors. It really wasn't much an issue with the supermarkets, because the price could get passed straight through irrespective of the retail price that was charged to customers.

Mr Bezzi: We feel that that's essentially an unfair trade term, and we feel that it's very important that the bargaining power in the dairy sector be addressed through a mandatory dairy code that has to apply to all processors. We feel it's very important that their unilateral power to change contract terms be prohibited by the dairy code. We think that's a really important term. If that isn't done, essentially the code may as well not be promulgated.

Senator McDONALD: Thank you. This is my final question: further to the retailer section, has the ACCC done any work specifically in relation to retailers and their increased market power across areas of domestic consumption, like insurance, petrol, credit cards and so forth? If not, does the ACCC believe there's merit in examining this increasing power and its impact on bargaining practices?

Mr Sims: We have extensively looked at the retailers in the petrol market. That's been the subject of litigation where we took action against Coles and Woolworths as well as other petrol retailers. I note that the retailers are both out of the petrol business now. They've, in a sense, sold their businesses so that they no longer set petrol prices.
In terms of insurance and the other one you mentioned, they're more ASIC issues. The supermarkets' entry into insurance and—I can't remember what the other one you mentioned was; sorry. But they're both financial services which wouldn't come much to us; they're ASIC issues.

CHAIR: I've just got a couple of questions, and then we'll go back to Labor senators. Then we'll go to Senator Bragg. Senator Sinodinos, you've got questions as well?

Senator SINODINOS: Yes.

CHAIR: I've just got a couple of minutes. I'm not going to give this particular gentleman any publicity. I'm happy to circulate the article to my colleagues. But we've people with black boxes going out into drought affected areas saying they can make it rain. I think you know the article. Mr Keogh was quoted in the article on Wednesday. Mr Keogh said:

If you wanted to prosecute, a court requires you to prove essentially that there's no basis for the claims being made; and that is a very difficult thing to do.

Why is it a difficult thing to do, to refute a claim that a black box can magically make it rain and, quite frankly, milk desperately needed money from our farming communities?

Mr Sims: I'll get Mr Greiss to add to this. Just speaking generally, whenever someone makes a claim that something can do something, the onus is on us to, in a sense, prove that it can't. That requires expert witnesses and so forth.

Mr Greiss: Mr Sims is absolutely correct. There is a significant onus on us. That's not to say that in cases where there are spurious claims we wouldn't take that on. One way of prioritising those sorts of matters is to deal with complaints we receive. In that particular instance, perhaps surprisingly, we have yet to receive any.

CHAIR: The Victorian Farmers Federation is quoted in this article, which I'm sure you have read. It describes this particular gentleman as:

… a "snake oil salesman" and urged vulnerable farmers not to engage with his company.
"Farmers are under extreme duress at the moment," he said.

What level of complaint do you need? Do you just need the Victorian Farmers Federation coming to you and complaining about this? Do you need a senator complaining about this to you? I know you're aware of the issue, because Mr Keogh is quoted in the article.

Mr Greiss: Yes. Indeed, we can initiate on our own motion, of course, so we don't need a specific complaint. In terms of prioritising matters of concern, usually we see what level of concern there is in the community. But in relevant circumstances we can take our own action.

CHAIR: In terms of getting expert witnesses, there's a professor of physics quoted in this article, describing these electromagnetic scalar waves that apparently cause this weather action. He said:

Electromagnetic scalar waves don't exist. There's no such thing …

So I think some expert witnesses would be reasonably easy to find.

Mr Sims: Possibly so. Usually, we find that the other side has an expert witness as well and it's one expert witness against the other. I understand what you're saying here. I guess the other point to make is our resources are 120 per cent utilised. So if we look into this we've got to take them off that. What we'd like to understand is to what extent this is causing harm. That is to say, if someone goes out and says something, you're expressing an understandable degree
of scepticism. What we'd like to understand is: are the farmers as well? If this is as you suggest, a scam, if that is the case, how many people are being taken in? Our question is always, 'Is there detriment?' as distinct from, 'Is someone saying something incredible?'

CHAIR: I would be the first to admit that the water issues Senator McDonald raised are on a scale and scope that are much more important to the farming community. However, when communities are under pressure, under stress, the last thing they want to be spending money on, as the Victorian Farmers Federation said, is a snake oil salesman.

Mr Sims: We will have a look at it and see if there are any complaints.

CHAIR: I don't want you to divert resources towards it, but I just think it's—even if we just shed a bit of light on it through this process, that's a positive thing.

Mr Bezzi: I'm responsible for our agriculture team, and they've been monitoring the publicity that's been going on around this. There's been a lot of publicity given to the physicist you've named and his debunking of this. It's getting out onto ABC regional radio. We would hope that anyone who is for a moment considering purchasing one of these devices would listen to that physicist and immediately not do so. It's a weighing-up exercise in terms of our use of powers and watching what's going on.

CHAIR: I completely understand. Thank you.

Senator GREEN: I have one more question about the ACCC's northern Australia insurance inquiry. Recommendation 14 of the ACCC report argues:

The insurance industry should work with governments to identify specific public mitigation works ... that could be undertaken and insurers should provide estimates of the premium reductions they anticipate should the works proceed.

Actual premium reductions following such works should also be publicly reported by insurers, measured against their estimates.

That's just one of 28 recommendations. Minister, has the government approached anyone in the insurance industry to identify any public mitigation works that could be undertaken to reduce premiums? If so, could you provide the details of those projects.

Senator Hume: I'll have to take it on notice.

Senator GREEN: I want to move now to the recommendations that the ACCC made to government in February about implementing new mandatory safety standards for quad bikes. It took until September for the government to issue those mandatory safety standards. Did the government seek additional information or advice, or alternative policies, from the ACCC following the ACCC's recommendation to implement the new quad bike safety standards?

Mr Grimwade: Following the recommendation, around February-March this year, there were two subsequent consultation processes. The government instituted a consultation process on the draft standard, and there were 79 submissions to that consultation process. Some of those submissions engendered some change in the recommendation that we made to government. Following that period there was a request—I think through the United States—for Australia to notify the standard to the WTO through a separate consultation process, which we then engaged in for a period of three or four weeks. There was one submission from an industry association but none from member countries of the WTO. So there were two
subsequent consultation processes that we had to have regard to before we were in a position
to finalise the standard for the government's consideration.

**Senator GREEN:** So that was all the consultation that occurred after February, after the
recommendations had been made—two extra consultations?

**Mr Grimwade:** Yes.

**Senator GREEN:** Thank you. What are the ACCC's product safety priorities, and how
does the ACCC select these priorities?

**Mr Grimwade:** Over the last two years we've initiated a process whereby we engage in
consultation with various stakeholders, external and internal, set out our key product safety
priorities, and announce them and launch a document in March. We are in the process of
developing product safety priorities for the next calendar year. Our current priorities are
outlined in a product safety priority statement, which is on our website. There are nine
priorities there, some of which are the implementation of a quad bike standard, the
implementation of the Takata compulsory recall and advocacy for a general safety provision.
There are some others I can't quite remember, but they're available on the website.

**Senator GREEN:** How many staff does the ACCC have working on each of these safety
priorities?

**Mr Grimwade:** Our product safety branch has a total of around 50 staff. We have a
separate team of about 12 staff that's funded to manage the Takata compulsory recall. We
have about 62 to 63 FTEs in product safety. There are seven teams. There is a quad bikes task
force and there is a Takata task force. The priorities are divided up depending upon the issue
that we are confronting. If it's surveillance there is a surveillance team. There's a recalls team.
There's a regulatory reform team as well.

**Senator GREEN:** Are the teams different sizes depending on the area that you're
covering?

**Mr Grimwade:** Each team is around the same size, apart from the Takata task force,
whose is the most significantly sized team.

**Senator GREEN:** Has the ACCC sought additional funding from government to work on
any of those product safety priorities?

**Mr Sims:** I'll jump in there. We have a process underway with Treasury and Finance in
relation to our funding in general, which is working its way through the system between
departments. There are a couple of key areas of concern in relation to staffing, and product
safety is one of those. We're hoping to get more staff into product safety as part of this
broader process, but it's something we're working through with those other departments.

**Senator GREEN:** Thank you. Are there any activities that the ACCC would like to
undertake in the product safety space that they are unable to do at the moment due to a lack of
resources?

**Mr Sims:** I'll let Tim follow up, but the ACCC's life is continually about choice—which
cases we take on—because there are many more cases we could take on than we have
resources to. Safety is the same. I think, like most regulators, you have to make choices about
which issues you prioritise, because there are an endless number you could work on.
Mr Grimwade: There's not much more I can add. We are a risk based regulator. We receive around 13,000 product safety complaints. We can't action them all. We can only investigate a relatively small number of those. In our consumer and competition enforcement area we receive hundreds of thousands of complaints and reports, and we can only investigate and prioritise a small number. There are a few product safety issues that we feel can be deferred until next year once we have completed particular projects. For instance, we have a project now where we are prioritising button battery safety. Following that it's our intention to deal with toppling furniture—furniture that is unstable and can fall in households.

Senator GREEN: If you had more staff you could obviously get to that a bit quicker?

Mr Grimwade: If we had more staff we would be able to support a whole series of product safety activities with more scale and scope.

Senator McALLISTER: I have a couple of follow-up questions about the housing inquiry and then that's probably it for Labor senators. Mr Sims, you made some public remarks back in September that you wanted to undertake a deep dive inquiry into the major banks—I think that was the idea. I understand that the context for those remarks was your appearance at the House economics committee—that's correct?

Mr Sims: Yes.

Senator PRATT: A month later, or thereabouts, government has now directed you to undertake an inquiry into home loan pricing. I'm trying to understand what your interactions were with the government in the lead-up to that inquiry prior to your appearance at the House economics committee and subsequently.

Mr Sims: We were set up in May 2017—it was new funding; a new unit—to do a series of inquiries into ways to make the financial sector more competitive. Unlike some other work in electricity and gas, this was meant to be a permanent role but it was meant to be a series of inquiries. We'd do one, then there'd be another one and then there would be another one. The understanding was that on each occasion they'd be an inquiry directed by the Treasurer, and that unlocks our information-gathering powers if we do an inquiry or a study. Without the Treasurer directing us we don't have the information-gathering powers. So the understanding was that we would do a series of these, one after the other. The first one was to see whether the mortgage levy had been passed through, the second one was on foreign exchange, and, as that came to a conclusion, obviously discussions were about the third one. As I say, it was meant to be a series of one. So, contrary to how it was portrayed in the press, this wasn't a new idea we had that we plucked out of the sky; this was ‘Well, what's the next one?’ We had discussions with Treasury. We would have had some discussions prior to September. The discussions would have been more intensive after that to shape what this inquiry is.

I guess the only other thing I can say is that whereas the Productivity Commission did a one-off inquiry that looked at competition in the broad, our series of inquiries are to be reasonably narrow, in depth, looking at an issue and getting right to the bottom of it. This came out of that. In September, when I mentioned that, I hadn't thought I'd said anything unusual in the sense that what we're doing is a series of inquiries. But I think it was to some extent interpreted as 'Gosh, new idea! Do an inquiry.' Actually, what I had in mind to say was that we thinking about what the next one would be—because there has to be a next one; that's the way the system is set up.
Senator McALLISTER: What do you intend to focus on the inquiry?

Mr Sims: Two things—and I'll see if Mr Bezzi wants to add anything. First of all: understanding how the banks make their interest rate decisions, particularly in the context of Reserve Bank rate changes—what information they have and what they are trying to achieve. We will just be trying to understand that process in a much deeper way than I think we do now. Separately: what are the barriers to consumers switching? We are all aware of that gap between what new borrowers and old borrowers pay. That's quite a considerable gap. How can we get more customers to switch to take advantage of the lower rates?

Mr Bezzi: On that second point: we are looking in particular at the strategies businesses employ to take advantage of consumer inertia and prevent people from leaving them—

Mr Sims: Or discourage them.

Mr Bezzi: Sometimes it can prevent—but, yes, discourage people from leaving. And then they get the advantage of being able to charge the loyal customers higher than the new people because the price of switching is relatively high or the process of switching is relatively difficult.

Senator McALLISTER: Will you be looking at, for example, horizontal product integration within those lending institutions? This committee, perhaps two parliaments ago, was looking at the same set of issues around switching in relation to credit cards. At the time, it became very clear that a person's selection of mortgage provider tended to also influence their selection of provider for other services.

Mr Sims: Absolutely. We'll be looking at the whole product bundling question.

Mr Bezzi: Yes. It's specifically mentioned in the terms of reference.

Senator McALLISTER: Thank you.

CHAIR: Senator Bragg, are you ready to go.

Senator BRAGG: Yes, I'm always ready to go! I want to ask about the latest on the consumer data right and some of your activities in that space. Could you give us an update?

Mr Sims: Absolutely. And I'm going to pass straight to Mr Gregson on that one, so that you can hear it from the horse's mouth.

Mr Gregson: As you will recall, Senator, we've been working towards the launch of open banking, which is the consumer data right in the banking sector, for February next year. We are working very hard towards that timetable. Since we last met at this committee, a number of milestones have been achieved. To facilitate that preparation for launch, we've issued a lockdown version of our draft rules. The rules are the framework that set all the systems in place for open banking or the consumer data right. And we are due to provide those to government to make the final rules very shortly—in the next few weeks. That's been gratefully received by the banks so that they can build their systems.
We've also opened up to expressions of interest, received those expressions of interest and now made selections for the data receivers to enter a test program and be advanced partners for potential launch next year. We received 40 of those and selected 10. We're working with those to see how ready they are to participate in testing. Testing is a key component for delivery in February next year. Testing really is where a lot of the work is happening at the moment. We've released a number of materials. We're using a partner of Ernst & Young to assist us with that testing. We've issued a test plan, most recently, and also provided the scenarios for testing which the banks have been seeking. It is a very tight timetable, and that's where a lot of the pressure points are emerging, in that test regime. We are working very closely with banks to do that.

Perhaps the final point I would mention is accreditation. We've had the data receivers come in for testing but we also need to accredit data receivers to make the system operational, so we're working very hard to make sure our register and our platform for accreditation are open and running. That's making a lot of progress but there's a lot of tension in that timetable as well.

CHAIR: I have a follow-up question. How far ahead are you thinking? Obviously, we had Facebook in front of the US Congress overnight talking about their cryptocurrency, Libra. There's the potential, both in the data rights sphere of social media and in the increasing use of social media platforms, to provide banking services. Have you thought beyond the framework of the current financial system and how things might look in a relatively short period of time?

Mr Gregson: Very much, though I'd have to say the task before us on banking is significant and occupying most of our time. That said, when government announced the consumer data right it mentioned three priority sectors to move to: firstly, banking; secondly, energy; and then telco. That is still the rough batting order of matters, but that's always subject to review. We're making progress with energy. We've already issued—earlier this year—our position on the slightly different model for energy given the infrastructure that already exists, and we're continuing to work on a timetable for moving on energy, which sits parallel to the work on banking. There are a number of other sectors that have been mentioned by different bodies, and they're certainly on our list of things to consider.

With respect to social media, to the extent that they are providing banking or financial services and to the extent that they start participating as a data receiver, the concept of reciprocity might kick in under our rules, so they might be subject to some participation and regulation under the consumer data right. More generally, with respect to their data, we did consider the issue of data portability in our Digital Platforms Inquiry report, which we released earlier this year. We indicated that there are some things that may make it not as adaptable as other sectors. But it was an issue for further consideration, so we'd have that on our list of matters to consider for the future of CDR.

CHAIR: I would have thought platforms like Google arguably have been the most successful at monetising consumer data. Would I be incorrect in that assumption?

Mr Gregson: Absolutely. We have much to say about the monetisation of data through those platforms, Google and Facebook.

CHAIR: And similar.
Mr Gregson: That's a different question, though—about whether there are use cases that consumer data right would benefit from and, ultimately, consumers would benefit from. One of the more obvious use cases for the consumer data right is the ability to compare and switch, and you'd have to think about the type of data that those platforms hold and whether providing consumers access to that and the ability to provide to third parties enlivens those use cases. There are of course other use cases, but an understanding of the structure of data that the platforms hold is key to understanding whether the consumer data right will assist. It's a very complex issue.

Senator BRAGG: Can I check, because you've got a big job ahead of you between now and February: are the ACCC meeting all their targets, in terms of the timetables you've set, to get the regime up and running?

Mr Gregson: We are still working towards February. But, as I've mentioned a couple of times, it's a very tight timetable. There are some milestones we are behind on, and we are continuing to review, assess and advise government on that, including whether there are mitigation options available to us. But, as you point out, three months is eroding quickly.

Senator BRAGG: How far behind?

Mr Gregson: It's different for different milestones and we have different strategies to catch up. Testing, as I mentioned, is a key issue. We started testing later than we would have liked, and there are some readiness issues both from our end and from the banks that we are working through. The build of our register is one that, again, we are a little bit behind on, but we don't think that's going to be a contingent issue for February. But the build of our register is the next major milestone. I have to be very frank: there's some very significant tightness in the timetable and we are doing everything we can to manage that.

Senator SINODINOS: I may be behind the times on this, but where is your inquiry into the big platforms and their impact on the media industry at?

Mr Sims: We gave the report to the Treasurer in July. Then government went into two phases. The first phase was Treasury running a consultation process. As I understand it, they've got a couple of hundred submissions. Then Treasury, A-G's, PM&C, the Department of Communications and the Arts and others will formulate advice, and then government have said they'll make decisions in response to our report by the end of the year, before Christmas. That's an ambitious timetable, but, as I understand it, they are working on it. We are engaging with them now and again, but it's very much a Treasury run process.

Senator SINODINOS: Given the nature of these platforms, the way they are using data, as Senator Brockman talked about before, they can essentially enter any market they want. Amazon do that, for example. They use the data to work out what consumers want and then they come up with their own versions of particular products, and that can undercut the existing product. That can be great for the consumer, but the question then becomes: what is the impact on overall competition of these sorts of entities doing this? It's a broader issue than the media. Do you think those sorts of entities can be subject to the traditional tools of competition policy?

Mr Sims: This is why we want to set up our digital platforms unit. It is always self-serving when a regulator says, 'Can you give us more resources to set up a unit to keep looking at it?' but I'd like to think we showed from our 650-page report on digital platforms
that it's needed. We've got 23 recommendations to deal with issues that are there now, but we think there needs to be continuing monitoring of and focus on these sorts of economic issues. I'll answer your question, but these are really tough philosophical issues. Your description of Amazon is a classic description of those tough issues. As far as our issues are concerned—use of market power and misleading consumers—we think the competition laws we have in place now are sufficient because the government introduced the changes to section 46. It was always amusing to me how that was put as a supermarket issue, whereas it's obviously very relevant for things like digital platforms and all sectors. So that gives us what we need there. But, on the consumer law, we did say in the report that it would be a good idea to make unfair contract terms illegal rather than just void. I understand that's an issue the government's considering. We also said that there's a process underway between consumer ministers to consider whether there needs to be an unfair practices provision, which they have in the US and the EC and in many other countries. That would probably be really helpful, particularly for a digital platform. So we think there need to be changes to consumer law, not competition law.

Senator SINODINOS: Just back on the banking inquiry you are doing now into net interest margins—sorry, did you want to add something?

Mr Bezzi: Yes, I just wanted to add that the other element that I think is important—and it's something we are working on—is international cooperation in our investigations and enforcement. It's very obvious that, as we move into a world where a lot of the decisions about how businesses are being run in Australia are going to be made offshore, we need to be able to work very closely with our counterparts in other jurisdictions, particularly in the United States and other more developed economies like the EC. That's something that our international area is doing a lot of work on behind the scenes.

Senator SINODINOS: That's good. Back on the pricing transparency inquiry and whatever you're doing with the banks now: apart from trying to get consumers to be less inert and more willing to shop around, are you going to look at structural impediments to competition in the banking sector—for example, is it a level playing field between big and small banks, and those sorts of issues?

Mr Sims: That might come into it a bit. That might also be something that is part of a subsequent inquiry. I think these inquiries are meant to be short and sharp. It's going to take a year, but, by the time you get the information, that's short. We're really looking at those barriers to consumer switching and, in a sense, that question of 'customer inertia'—a term you and Mr Bezzi used. That is probably part of it, but, as Mr Bezzi said, we're looking at barriers put up to stop consumers moving. Obviously banks, like any business, have processes to try and stop people moving or make it harder for them. On the issue of competition between, say, the big four and other banks, I think there are issues there, but that probably won't be central to this inquiry. It may very well be relevant to a future one.

Senator SINODINOS: Thank you.

Senator PATRICK: I've got some questions possibly for the AER, but I might start by directing my first one at you, Mr Sims. It relates to the topic of day-ahead capacity auctions in the gas market. Are you the best person to chat to? That is AER, is it?

Mr Sims: I think day-ahead is over there.
Senator PATRICK: Mr Adams—okay. My understanding is that this day-ahead auction has been running now for six months or something like that.

Mr Adams: Yes.

Senator PATRICK: For all those avid readers of the AER weekly gas market report—and I'm sure there are many of them—it appears as though it's been relatively successful. Would that be your view?

Mr Adams: We've certainly seen the introduction of those new trading platforms around the Wallumbilla hub increasing the ability for participants to move gas around the country. So, from that point of view, I'd say it's been a positive initiative.

Senator PATRICK: Maybe for the benefit of the committee, could you explain day-ahead capacity trading in two syllables or less?

Mr Adams: Good luck! The arrangements are designed to provide greater flexibility for participants who have gas in the short term to be able to move it to meet their needs.

Senator PATRICK: My understanding is that the number of trade participants has increased from one at the start, in March, to about five now, and there's been significant activity. Indeed, there have been a significant number of trades at a zero-dollar cost. Is that correct?

Mr Adams: Correct.

Senator PATRICK: My question is: what's the normal trading price for moving gas? When I say 'zero', what sort of saving is that on perhaps a nominal price?

Mr Adams: If we were to look at clearing prices that are occurring across the various markets across the country, a few years ago they were in the $3 to $4 range. Obviously, over recent years, that's increased significantly, to the $8 to $9 range.

Senator PATRICK: That includes the gas itself. Isn't this just talking about the movement of the gas?

Mr Adams: Correct.

Senator PATRICK: What's the typical charge for the movement of the gas?

Mr Adams: I don't have that number in front of me. I could take that on notice, unless I can get support from our regulator people.

Ms Groves: We'll take it on notice.

Senator PATRICK: I guess the point I'm trying to come to is: if you now have a situation where the cost to transport gas has been zero dollars in a number of instances, how is that translating through to lower gas prices for consumers? Is that being measured? Obviously this measure has been put in place to deal with perhaps a monopoly situation. Mr Sims's report talked about a monopoly situation on the east coast and making sure that, as the price is cut for gas transport, it's not just picked up as profit for the retailers. What are you doing to make sure of that? Are you measuring, or looking for a reduction in, prices? Are you measuring that? What's your plan?

Mr Adams: I think it's important to recognise that these new arrangements are to be able to maximise the use of gas that wouldn't have been used otherwise. Typically, contract arrangements are over the longer term. If there's spare capacity that others can take advantage...
of in the short term, this is what these markets are trying to encourage—to be able to provide that greater flexibility.

Those markets are extremely new and are just in the development stages. Over the longer term, our role is to ensure that we report on this and ensure that those markets continue to deliver benefits. I suspect our longer-term views on this and our quarterly updates in terms of gas prices would see the changing trends. What we have seen as a result of these new markets is greater gas moving from north to south. Part of that is because people can pick this gas up in the short term and move it forward, which is a positive indicator for us.

So, in answer to your question, I suspect our role is an ongoing monitoring role. I don't have any specific answers just yet, but we're continuing to watch.

**Senator PATRICK:** The keyword I heard you talk about in there was 'benefit'. You must need to be able to measure the benefit in order to work out how effective the measure is. I wonder if you could take this on notice: I am specifically interested in you having a look at the fact that we've had zero-dollar auctions, and a significant number of them—up around 40 per cent or something, in some cases, on that trading platform. What effect is that having on the reduction of gas prices to consumers? That is ultimately what every one of us is interested in, not the machinations. That's your part of the ship.

**Mr Adams:** We can certainly take it.

**Senator PATRICK:** Thank you. My next question, again, goes to the AER. It appears to have initiated legal action against the wind farms in respect of the blackout in South Australia—which was back in September 2016, from memory. I don't want to go into the matter in too much detail, because it's before the courts and it's not where my line of questioning is going. But just by way of preamble and context, my understanding is that there is an obligation for any participant in the electricity market to be able to deal with, at the very least, 'N minus 1', meaning that something in the network goes down and the network is essentially not disrupted significantly.

**Mr Adams:** I—

**Senator PATRICK:** Maybe I have the wrong person?

**Ms Groves:** We're just doing a slight exchange here. I'll ask Mr Adams to come back. While I think that the nature of the obligations in the rules get to some of the sorts of outcomes you said, they're certainly not phrased in those sorts of terms. In essence, the nature of the obligation is around the generators being able to deliver what they've said they're able to deliver. I'll ask Mr Adams to speak a little more specifically about the rule principle.

**Senator PATRICK:** Obviously, I don't need to go to the details of each specific case, but the general principles—

**Ms Groves:** No, but there are some important differences that I'd like Mr Adams to point out.

**Mr Adams:** The principal of the technical performance arrangements that exist in the national market place obligations on every participant to be able to satisfy certain technical requirements. The market operator, AEMO, needs to be satisfied that all of those participants are fulfilling those obligations. This investigation and these actions are related to
circumstances where, in our view, participants didn't satisfy those technical performance standards.

**Senator PATRICK:** Okay, I'll go to the same day—and I don't like to advertise the fact that South Australia did have a statewide blackout. However, as a result of that blackout Port Lincoln effectively lost power for three days. The reason it did that was because the backup generators in Port Lincoln did not operate properly. I wonder, as you were looking at wind farms and other operators, whether or not you looked at the operator of the Port Lincoln diesel back-ups and whether indeed you are considering action against them.

**Mr Adams:** What I can say is that, as part of that investigation, we looked at all the participants that have obligations under the rules, and, as you will be aware, that report was an extensive report; it had certain elements that we covered. The most recent case in instituting proceedings is part of that process. But it does rely on participants having obligations under the rules, and our investigation did look at all of those aspects. If my colleague would like to expand on that further in terms of enforcement, I am happy to hand over.

**Senator PATRICK:** I am interested in why, you would understand, a whole city was without power, effectively for three days. I am grateful for the people that helped to assist to get it back online, but that should never have happened. I wouldn't mind understanding the reasons why there are no actionable events in that instance.

**Mr Adams:** Just to try and add and clarify slightly, the way the provisions in the rules are written is that these generators and participants in general have an obligation to do certain things in under certain times, and that is to assist the market operator to maintain the security of the power system. There may be circumstances where stand-by back-up generators may not deliver what they're required to do, but that is not captured necessarily by what the rules require. So our investigation was entirely focused on making sure participants that had obligations under the rules satisfied those obligations.

**Senator PATRICK:** All right. Can you do two things for me. One might be simply directing me to the report area that describes the Port Lincoln situation and why there wasn't a breach of those particular rules. Secondly, it leads to the question: are the rules sufficient? If you've got a whole town that loses power for three days and the rules permit that—it's not a breach of the rules—I put it to you the rules need to be changed, because people in remote communities are entitled to the basics, and one of the basics of modern life is electricity. Indeed, there are significant dangers in certain circumstances where electricity supplies are cut.

**Ms Groves:** Certainly, we can provide you—perhaps by extracting the relevant sections from the various reports on this that have been done by either ourselves or AEMO—a more fulsome explanation of the Port Lincoln circumstances and the rules framework that sit around that.

**Senator PATRICK:** And what may need to change.

**Ms Groves:** And we can certainly take that one on notice. As part of our investigations into these matters, we did identify some components of the rules where we felt they did not provide sufficient clarity on the day, and we have put in a series of rule changes on a number of those already, but we will certainly provide you with more information in respect of Port Lincoln.
Senator PATRICK: And maybe you've addressed it then; if you could spell that out, that would be useful.

Ms Groves: We certainly will.

Senator PATRICK: I will just go to a final matter. You would be well aware that there is a plan to build an interconnector between South Australia and New South Wales. My understanding is, by way of some form of competitive proposal, ElectraNet has been selected as the entity that would ultimately build the interconnector. Is that correct?

Ms Groves: I will ask Mr Roberts to deal with that one.

Mr Roberts: ElectraNet is the planner, and they're the proponent of this proposal. The two bodies that are involved in determining whether these interconnectors should be built are AEMO and also the network operators. In this case, ElectraNet is the network operator, and they've done the planning and put together the proposal.

Senator PATRICK: I realise there are other players involved, but I can't get to them very easily—you've drawn the short straw. Where I would like to go with this is: there are opportunities in the construction of this interconnector—and indeed poles and wires all around the country—for Australian companies to contribute by way of Australian steel and indeed fabrication of transmission towers. ElectraNet—and I use this as an example, because I'm in some sense talking about the bigger picture where there are other activities that will take place—is a majority Chinese owned company. We know that there is a lot of steel that comes into this country from China that may not, in the end, meet Australian standards or be of the quality that we may otherwise expect. Are there any requirements in relation to transmission towers? And I know it's not proper to say that things have to be Australian made, but we certainly have the capacity to specify Australian standards in a statement of requirements. Do those exist in the context of transmission towers?

Mr Roberts: What I can say is that, from the AER, from our side: no, we don't have a requirement in terms of where the steel is sourced from.

Senator PATRICK: I'm not after where it's sourced from—and I understand the difficulties with that—but you should be able to specify that a particular steel meets a particular standard. Indeed, in our procurement rules—and I don't know how things work in respect of the electricity market, because there is a COAG element to it—there are provisions in relation to Australian standards in government procurements so there's an accepted principle that government entities can impose a standard on entities providing public services, public infrastructure.

Ms Groves: Thank you, Senator, and I appreciate your comment that it may involve many players who aren't before you and I think that is the answer to your question. So the AER’s role, as Mr Roberts has said, is not directed in this area. Our role is to ensure that transmission companies, which are regulated businesses, provide their infrastructure and services at the most efficient, effective costs in the long-term interests of consumers and meet their obligations in doing so. And I think it's that second part that's probably most relevant to your question.

Senator PATRICK: So it's about value, not cost. One of my concerns is: you can just come up with a cheap solution, and it might not be the best value for the consumer.
Ms Groves: Transmission companies are all required to have licences in each of their jurisdictions. So, for example, ElectraNet, who you've named, is licensed under South Australian state legislation. As part of those licensing requirements, there'll be a range of obligations on them to meet a whole range of standards and services. While I'm not familiar with the direct standards, they will have safety obligations and there will be health and safety obligations, environmental obligations—there are a range of all of those that the network businesses are required to meet to ensure they stay compliant with their licence standards.

Our role, when we're approving their revenues, is to ensure that the amount of revenues that we give them is sufficient for them to be able to do that in an efficient, cost-effective way. So I suspect your questions around the standards for construction, performance of towers—those sorts of issues—are probably dealt with more by state legislation within the licensing requirements of the transmission businesses.

CHAIR: Can I just check where we're at?

Senator PATRICK: Yes, just about finished. I would be most grateful if you could confirm that by way of a question on notice, because you are in a much better position to work out where that might land, even if it's not directly within your responsibility.

Ms Groves: We would be happy to provide you some advice on the framework around the safety standards.

Senator PATRICK: It is because I have to know which door I am going to knock on next.

Ms Groves: We will provide you with their address.

CHAIR: There being no further questions for the ACCC, including the Australian Energy Regulator and the National Competition Council—didn't get much of a run—we thank you for being here today and will now move onto the ABS.

Australian Bureau of Statistics

[10:15]

CHAIR: I welcome officers from the Australian Bureau of Statistics. Did you wish to make any opening remarks or shall we go straight to questions?

Mr Kalisch: No, I don't have an opening statement, in the interests of time, but I would suggest you give me a little bit of indulgence in the answers. They might be slightly longer.

CHAIR: We are full of indulgence.

Senator McALLISTER: We do have quite a few questions for you today. We are conscious that this may be your last estimates. Is that correct?

Mr Kalisch: It's expected to be my last estimates as Australia's statistician—unless you want to bring us back next week!

Senator McALLISTER: I am seeking to understand some of the processes around preparation for the 2021 census and, in particular, the way in which questions are being selected for inclusion in the census. In your public documentation, you have called, over a long period of time, since at least April 2018, for input around the questions for the next census. You have said the ABS will assess any changes suggested through the submission process based on evidence and on demonstrated need. We will seek to minimise the burden on
the community by managing the number and complexity of questions asked in the census. So they are the criteria that's being applied—demonstrated need, balanced against complexity?

Mr Kalisch: There are probably a couple of things you need to understand about the selection of census topics. This is not a matter for the ABS. The ABS is assisting government in that process. The selection of census topics is a decision of government; it's not the decision of the Australian Statistician or the ABS, so we have, as we always do in the lead up to a census, undertaken a public consultation process, certainly announced some criteria that we would suggest people try and consider in their submissions. I will talk about those a little bit later. Probably there are two overarching things that I'd also suggest that government is considering and needs to consider. The Australian census is one of the longest population census processes. We do impose a fair bit on households to answer those questions. We have about 60 questions in the current census. Our estimate is that it takes in the order of 25 to 30 minutes for a household to complete the census. This is something they need to do themselves or with some assistance. This is not something where we have field interviewers that go out and assist households. This does need to be largely in the realm of questions that people can understand easily and can respond to accurately.

The other dimension that's key to the consideration of census topics is that, overall, we want people to complete the census accurately and fully and have as many people complete the census as we can. Therefore, we need to balance the utility of the specific questions against the overall completion rate and the overall response rate. In the last census, in 2016, we achieved a 95 per cent response rate. That was comparable with past instances. But we are seeing two aspects. We are seeing some concerning trends in other countries where it's becoming more difficult to achieve an overall response rate, and that has certainly been the case in New Zealand recently. The other dimension we are seeing is that response rates to our Labour Force Survey and other household surveys have also been somewhat more challenging over recent years. So there are some dimensions to it. I will ask Teresa Dickinson if there are further issues you want to go into.

Senator McALLISTER: Thanks very much. That's helpful. You have described your role and the minister's role. Essentially: you will propose a set of questions to the minister, the minister is ultimately the decision-maker, and then that is promulgated through subordinate legislation. That's correct?

Mr Kalisch: We have certainly provided the minister with further information. We have already provided some information to the minister about the results of the submission process and the results of our early testing of a number of those questions. We've provided some indications as to questions we think could come off the census.

Senator McALLISTER: Ons and offs?

Mr Kalisch: Ons and offs. We are trying to make some headroom. Ideally, I would like to see as many questions coming off as going on, just to try and balance the respondent burden. Then it is a matter for the minister to make a decision, then it's up to the government as to what process they use internally to come to that final decision, and then a regulation will be put into the parliament.

Senator McALLISTER: So you've provided some advice but not your final advice?

Mr Kalisch: We've provided as much as we are going to.
Senator McALLISTER: I see. So you have provided final advice. Can I ask about the process that led to that advice? You undertook stakeholder consultation, you called for submissions, you did testing, focus groups, discussions—the normal kind of consultation process we would expect from an independent statutory agency.

Mr Kalisch: And a little bit more in that we then take the nature of the questions and test whether the community in the broader sense can understand a question of that form. So we do test out different wording and different approaches as well. We do some cognitive testing.

Senator McALLISTER: How do you evaluate the options? Do you have rankings or scorings?

Mr Kalisch: We have produced a public consultation document that was released late last year that provided a pretty thorough summary of the range of different topics that were proposed through that consultation process, as well as some early consideration of possible questions that could come off the census.

Senator McALLISTER: I understand that there were eight new topics that were suggested as a result of the first phase of consultation?

Mr Kalisch: The consultation phase drew out, I suppose, eight in the 'more likely' category, and they were the eight questions that we did a bit more work on.

Senator McALLISTER: What was your assessment about questions around gender and sexual orientation?

Mr Kalisch: In terms of the consultation process and where we got to in terms of cognitive testing, some sensitivities were identified.

Senator McALLISTER: But they were in the eight; that's correct? Questions on gender and sexual orientation were in the eight that were in the 'more likely'?

Mr Kalisch: They were two of the eight. But, from the cognitive testing, it was clear there were some greater sensitivities. There were certainly a few responses in terms of particularly, say, gender identity. Some people in the broader community were challenged to understand what they were being asked, because we had already asked a sex question around 'male or female'. So a number of them were considering: 'So what's this other question? Haven't I already answered that?' The other dimension around sexual orientation was obviously the sensitivity of it. So some of the things that we were contemplating within the testing of those questions were: if it was to be included, where would it be included? Would it be an optional question? There were some of those aspects on which we provided advice.

Senator McALLISTER: A trial was undertaken of some of the new questions, I understand, in Wagga and the southern suburbs of Brisbane.

Mr Kalisch: We are doing a first field test, but it's not just of questions.

Senator McALLISTER: It's also of process.

Mr Kalisch: It's predominantly not around the questions; it's predominantly about other processes. If you want further information, I can go into that.

Senator McALLISTER: Part of that has been concluded—the trial that was conducted in Wagga in October this year. Is that correct?
Mr Kalisch: It is still underway. The notional census reference night has passed, but we are still following up with people about the responses to those forms. It was a voluntary test as well, so we are trying to get as much information as we can from that test.

Senator McALLISTER: Were questions around gender or sexual orientation included in that field test?

Mr Kalisch: There was a question on sex in the list of questions. I think we also included one or two others in that test that were not in the previous census, and we have also excluded some. The issue we are trying to judge within the test is how our field operations work and how people respond to the online form itself. We haven't sought to pre-empt government's decision around the topics, and the reality is that this test will not provide information in time to be able to inform any deliberations of government around content.

Senator McALLISTER: I see. It's been put to me that the first print run of the census test included a series of questions around gender and sexual orientation, and that that first print run was pulped, and a second print run was commissioned which excluded those questions. Is that correct?

Mr Kalisch: We printed two types of forms: form A and form B. So we did at the outset print two forms, which had two different sets of questions on them.

Senator McALLISTER: Were they both used in the field test?

Mr Kalisch: Only one of those forms was used.

Senator McALLISTER: Why was that?

Mr Kalisch: I made a decision that we would only go with the one form.

Senator McALLISTER: When did you make that decision?

Mr Kalisch: I'd have to take that on notice.

Senator McALLISTER: I understand you might not be able to provide the exact date, but was it before the field trial commenced?

Mr Kalisch: Yes, it certainly was.

Senator McALLISTER: Long before?

Mr Kalisch: We are now in October. So it would have been—I can find the date for you.

Senator McALLISTER: Shall we say that form A was used in the field trial and form B wasn't? Is that correct?

Mr Kalisch: Yes. You had a 50-50 chance of getting it right.

Ms Dickinson: Form B was used. Form A was not used.

Senator McALLISTER: How many copies of form A were printed?

Ms Dickinson: I'll ask the general manager for the census, Mr Libreri to come forward. He has direct experience in the logistics of preparing for the test. I'm going to say 40,000, but I want to make sure I get that right.

Mr Libreri: Yes. We printed about 40,000 that covered form A and form B.

Senator McALLISTER: Of each?

Mr Libreri: 40,000 together.

Senator McALLISTER: So 20,000 of one and 20,000 of the other?
Mr Libreri: Yes.

Senator McALLISTER: So 20,000 of form A were printed, and these included questions around gender and sexual orientation?

Mr Libreri: Correct.

Senator McALLISTER: But form B was not?

Mr Libreri: That's correct.

Senator McALLISTER: Were there any other differences between form A and form B?

Mr Libreri: Within form B we trialled two different approach letters to the census. When we send an approach letter we give you a time period in which you can fill in the form, and there was a difference in that.

Senator McALLISTER: Did the ABS receive any communication from Minister Sukkar or the Prime Minister or their offices regarding the inclusion of gender or sexual orientation questions in the census?

Mr Kalisch: I have had no contact from the minister or the Prime Minister or the Prime Minister's office. I have had some conversations with the minister's office about I suppose just helping them understand the nature of the consideration that they were going to make around the decision.

Senator McALLISTER: Did they seek to influence which form was utilised in the field trial?

Mr Kalisch: They put a view to me, but ultimately it was my decision.

Senator McALLISTER: What was the view that they put to you?

Mr Kalisch: I'm not willing to talk about that aspect, because it was really around the nature of them having deliberations around what they would do with the question.

Senator McALLISTER: Are you asserting that this was a cabinet decision?

Mr Kalisch: In terms of the census content?

Senator McALLISTER: You have received advice. I don't believe you've received a direction, but you've received guidance from a minister's office. It's a formal communication from them to you. It is not, as far as I can tell, Cabinet-in-Confidence. I'm asking you what advice they provided about the approach you would take in the field trial.

Mr Kalisch: They did not provide any guidance in terms of what should be on or off the form. That was ultimately my choice.

Senator McALLISTER: Did they express a preference about which form you should use?

Mr Kalisch: They did express a preference, but ultimately it was also my call.

Senator McALLISTER: And that preference was that those questions around gender and sexual orientation not be included. Is that correct?

Mr Kalisch: They were I suppose contemplating what response they would finally make around census topics and didn't want to have the census test either pre-empt or not pre-empt that decision.

Proceedings suspended from 10:32 to 10:44
Senator McALLISTER: I have a couple of quick logistical questions for, I think, Ms Dickinson. You and your colleague, who was at the table earlier, said that you had printed 40,000 forms—20,000 of form A and 20,000 of form B. What was the timing of those print runs? Were they printed simultaneously or sequentially?

Ms Dickinson: I believe they were printed simultaneously. I will add to that that, when we plan tests for major surveys, it's not unusual that our planning proceeds on parallel paths, and it's not until we get closer to the test itself that we resolve various issues about ordering of questions, content of questions and approach to the test. This has happened before in tests; one recently was the longitudinal study of Australian children. So the ability to be ready to deploy into a test situation what we decide as the test approaches is facilitated by dual planning in the lead-up.

Senator McALLISTER: Mr Libreri, were the print runs conducted simultaneously or sequentially?

Mr Libreri: Simultaneously.

Mr Kalisch: I thought we had already answered that question.

Senator McALLISTER: I was just confirming, because, from his earlier contribution, it seemed that Mr Libreri was more involved in the logistical rollout.

Mr Kalisch: Mr Libreri reports to Ms Dickinson.

Senator McALLISTER: Minister, why did Minister Sukkar's office prefer that questions regarding gender and sexual orientation not be asked in the field trial?

Senator Hume: I think you're making an assertion there. The Australian Statistician has been perfectly clear that he is responsible for determining the contents and the objectives of the testing program but that the government determines the content of the census, and it is yet to make decisions on what topics will be included in the 2021 census. It will decide on those topics, and it will issue a census regulation with the list of topics. You can expect that to be tabled in parliament in early 2020.

Mr Kalisch: The one other dimension that I think also needs to be part of the understanding here is that we had already asked questions on sexual orientation in the ABS survey program. The general social survey that's already in the field, which is administered from a household perspective, already asks the question on sexual orientation. This was certainly part of my thinking as well—that we didn't need to do a full test. In fact we have a live test at the moment; it is an administered interviewer test, so it is a little bit different. But we do already ask questions about sexual orientation. We are already providing the community with information about that matter.

Senator McALLISTER: Minister Hume, the earlier evidence was that staff from Minister Sukkar's office did speak to the statistician about the approach to be taken in the field trial. Did Minister Sukkar have any conversation with the Prime Minister about the content of the census?

Senator Hume: I can't imagine why that would necessarily happen. I can take the question on notice, but I reiterate again that it is the Australian Statistician's decision to determine the content and objectives of the testing program and that it is the government's
decision to decide on the topics that will be in the 2021 census, and that is what the government is doing.

Senator McALLISTER: Can I ask you to take this on notice also: I don't expect you to have knowledge of every conversation that every person in Minister Sukkar's office has had, but, on notice, may I ask why staff in Minister Sukkar's office had a preference that questions on gender and sexual orientation not be included in the field trial for the census?

Senator Hume: I think you have made that assertion before, to the chief statistician. That's your assertion. There is no evidence that that is the case.

Senator McALLISTER: Okay. You've taken it on notice.

Senator WALSH: Mr Kalisch, my questions relate to the handling by the ABS of the 2017-18 household income and wealth survey, released in July. The ABS issued two media releases about the survey, one highlighting that average household wealth had topped $1 million and another highlighting that income inequality had been stable since 2013-14. The releases didn't go to further detail about what had happened to household wealth in that period. What had happened was that the lowest quintile went significantly backward and the highest quintile saw its household wealth increase significantly, and took a greater share of national wealth while the share of national wealth of other quintiles decreased significantly. This issue was covered in an article by The Guardian on 28 August, entitled 'ABS drops reference to worsening wealth inequality to craft a "good story"'. The article refers to emails that were obtained by The Guardian under FOI, which refer to someone working at the ABS saying, 'I am not sure that we want to draw attention to this'—that referred to the worsening wealth equality and that the lowest quintile was going backwards. The person who wrote those emails also said, 'We can present more of a story that inequality is stable if we put out a separate release on income inequality,' which the ABS then did. Why would the ABS seek to put a positive spin on inequality data?

Mr Kalisch: I saw probably about six or seven questions within your preamble then.

CHAIR: Unpack it a bit for us.

Senator WALSH: My question is: why would the ABS put a positive spin on inequality data?

Mr Kalisch: We don't. The release that you are referring to does talk about wealth inequality as well as income inequality. We even have headings in our press release; we have 'Income' and then we have a few paragraphs, and then we have the heading 'Wealth' and a few paragraphs. The overall heading is, 'Inequality stable since 2013-14', and that refers to the factual information that is contained in that survey release. Income inequality, from the numbers, hasn't changed over quite a few years. Wealth inequality has moved around a bit. But the one issue that we also look at is: what is the statistical significance of the change? You will understand that this a survey, and it is drawn from a sample of households in the population. Therefore, we do look at the statistical significance of any changes. There has not been a statistically significant change in wealth since 2013-14.

Senator WALSH: I'm listening to what you're saying, but is it not true that the lowest quintile went backwards in terms of wealth inequality and that the top quintile significantly increased its wealth?
Mr Kalisch: I'd have to take that on notice. Certainly my understanding is that the broad shares have not changed too much, but I'll take that on notice. Probably the one thing that is clear—

Senator WALSH: Can I just say that I'm advised that, in the same period, the lowest quintile went backwards seven per cent and the highest quintile increased its wealth by 20 per cent.

Mr Kalisch: That's one interpretation. I can also draw out other information from the statistics: has the share changed in terms of the top one per cent, the top 20 per cent, the top 60 per cent or the bottom 10 per cent?

CHAIR: Lies and damn statistics!

Mr Kalisch: There are ways in which people do interpret the data. I suspect this is one of those occasions. Certainly this was pointed out by a few academics previously, prior to the article in The Guardian—that is, that they would have preferred us to have profiled certain information rather than other information. Perhaps this does go to the broader issue around why we issue media releases. I suppose there are two understandings. One is that for most publications we don't issue media releases; we let the data stand by itself. We think people will generally draw into the data, and we don't need to provide further advice or assistance to the community to understand that.

Senator WALSH: Thank you, Mr Kalisch. Can I ask what your internal approvals process is for media releases, and whether you would have approved these media releases?

Mr Kalisch: I get to see some but not all. Ms McCulloch probably gets to see most of the statistical releases, if not all of them. It's probably one or other of us that would often have the final say.

Senator WALSH: Would you be able to advise us today or on notice who approved those two releases?

Mr Kalisch: I can certainly take that on notice.

Senator WALSH: Can you also advise us who the person is whose name is redacted in the FOI'd emails?

Mr Kalisch: No, I'd prefer not to. I think committees have generally not sought names of officers through FOI material. Ultimately, the accountability for those decisions that we finally make is in ones that I take as the Australian Statistician. We stand 100 per cent by the accuracy of those media releases. They might not be the interpretation that some people would have liked us to have drawn or the emphases that some people would have liked to have drawn. We have essentially looked at the data and said, 'This is our take,' on the best approach to that data.

Senator WALSH: I will come back to those questions. I think Senator McAllister has a follow-up question in relation to the redacted name.

Senator McALLISTER: Can you provide the positions that are involved in that decision process? You indicated that, ultimately, you are responsible for all public utterances by the ABS, but there was a group of people within the organisation who were engaged in an email discussion about what would be released and what would not be released, and, very clearly, there was a set of judgements made about what was in the public interest to be released.
think it is reasonable for us to ask who in the organisation is making those decisions and who is involved in those discussions positionally.

Mr Kalisch: Positionally, it is Ms McCulloch and myself who are making the judgements as to what's released. I have to say: there are people who work on different surveys in different areas who might have different judgements or different perspectives. Ultimately, we are making the judgements ourselves at the senior level.

Senator McALLISTER: When this judgement was being made, which divisions within the ABS were being consulted?

Mr Kalisch: It would have been primarily in our Population and Social Statistics Division.

Senator McALLISTER: Along with Ms McCulloch?

Mr Kalisch: That area reports to Ms McCulloch.

Senator McALLISTER: I see. So your involvement, Ms McCulloch—

Mr Kalisch: Luise oversights all of our statistical programs—so our economic program, our population program, our social statistics and our environmental program.

Senator McALLISTER: Is there a media team?

Mr Kalisch: We have a media team that works in our corporate area.

Senator McALLISTER: And they live in corporate. Is that in your group, Ms Connell?

Ms Connell: Yes, in the corporate space.

Senator McALLISTER: So was your team involved in this sequence of decisions that is being referenced by Senator Walsh?

Ms Connell: We put together a press release based on advice from the business, yes—but, ultimately, for Luise's clearance.

Senator McALLISTER: Thank you.

Senator WALSH: Mr Kalisch, I'll just take you back to the release entitled 'Inequality stable since 2013-14'. The title was actually referring to income inequality, which has been stable, according to the survey, since 2013-14. Why would you have chosen the time frame of 2013-14? Was that to do with the timing of the survey, or was it to do with when the government was elected?

Mr Kalisch: This, I think, was the time period which we used when the previous set of data was released. This survey comes out about every two years. We had talked about the change since 2013-14, when the previous survey was released, for data from 2013-14. Why would you have chosen the time frame of 2013-14? Was that to do with the timing of the survey, or was it to do with when the government was elected?

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stop-go decision about whether we will have a media release accompanying the statistics. The media release is done independently of the production of the statistics and actually follows that dimension. All of the data that we produce from the survey over time is the same as—I think; I'm sort of winging it here a little bit—but my presumption is the same format, the same type of data presentation that we had for 2017-18 was pretty consistent with what we would have produced in 2015-16. That data is there for journalists, for analysts, for academic economists, for all sorts of key users of this data to use. That hasn't changed. The data that we have used in these media releases is factual.

Senator WALSH: In relation to household wealth, notwithstanding that there was a different experience, as you might imagine, of different quintiles that are reported on, you stand by the headline 'Average household wealth tops $1 million' as being the most objective way for you to present this data?

Mr Kalisch: We thought it was an interesting statistic that would not otherwise get presented. It isn't the only information that we presented in the media releases. As you mentioned, we have two media releases: one that looks at income and wealth inequality and another that looks at some of these broader, more community-interest statistics that come out of our data.

Senator WALSH: Going to the issue of community interest, is it your role to assist Australians to understand their experience, to put it in context with objective statistical analysis, so that people can make good decisions to assist community decision-making?

Mr Kalisch: We are but one player in that contribution. We essentially provide the statistics and the authoritative data that people can use, and that is the role that we play. We also expect that media outlets and analysts will use the data, analyse it on its merits and present information.

Senator WALSH: In relation to this particular release of the Household Income and Wealth survey, did you or any of your officers have any contact with or from any minister or any of their officers in relation to how to describe the results?

Mr Kalisch: No. We never do. We never seek it. They never offer to provide us with any guidance about how we present data. This is something that is quite clear, which is why I am so emphatic about it. There is an essential separation between the Australian Bureau of Statistics, as the collator and provider of key official statistics, and the political process. We don't expect there to be any contact with ministers. This is something that is well understood. When a new minister comes into the portfolio, I have made it my practice to have an early conversation with them around the ways in which we operate. The ABS Statement of Expectations, which has operated since mid-2015, has also been clear about the expectation that the Australian Statistician controls the operations of the statistical process. There are also statistical codes in place. There is a legally binding OECD code that talks about the separation between the ABS and the executive government. This is something that is quite emphatic.

Senator WALSH: I appreciate all of your answers, but I really am still struggling to understand why it is that the headline in relation to this survey on the wealth inequality component was 'Average household wealth tops $1 million' instead of 'Rich get richer; poor get poorer', which the data also shows.
Mr Kalisch: The media release that we have on wealth inequality reports on the Gini coefficient, and that is the one that is in the other media release, 'Inequality stable since 2013-14'. The Gini coefficient for wealth inequality had not changed statistically since 2013-14. The overall headline is the one that is accurate. In the media release that we put out, we did talk about a marginal increase in wealth inequality in 2017-18. We were quite clear. They are the facts. Again, I suspect there some people that would prefer us to have highlighted different data. That is their call; that is our call. They can highlight it in their own analyses.

CHAIR: That is the role of media and politicians, I would have thought.

Senator McALLISTER: And the media unit, by the sounds of it.

Mr Kalisch: It is certainly not the media unit. This is the call that we made.

Senator WALSH: Do you, in thinking about what to emphasise and going with 'Average household wealth tops $1 million', consider whether those sorts of headlines might accord with what Australians who are absorbing the data are actually feeling or experiencing themselves? Do you think that that headline is consistent with what Australians are feeling and experiencing themselves?

Mr Kalisch: I suppose that is neither here nor there. What we do is produce the data. What the data shows is that average wealth has increased, largely because of increased property prices and increased superannuation. For most average households that is the reality, and it was at that time of 2017-18. Things might have changed a little bit since that time in terms of property prices.

CHAIR: Are we in the field yet?

Mr Kalisch: Yes, we are in the field for the next survey of income and wealth and so we will be reflecting probably some slight changes in property prices. Superannuation balances have gone generally up—I think that is probably the case over the last couple of years.

CHAIR: I just want to get back to that separation of the political from your role as producer of statistics. In another committee I was dealing with a particular statistical issue and I needed some expertise. Is there any capacity for members of parliament to in a neutral sense gain some statistical advice from ABS?

Mr Kalisch: We have certainly provided briefings to members of parliament about particular issues. If they are interested in a particular area of statistics or area of data, if they have a particular policy or service delivery issue, we are more than happy to provide that advice. We also provide a newsletter to parliamentarians about the latest statistics coming out from ABS.

CHAIR: No, I meant more on a particular public policy area.

Mr Kalisch: We're very happy to provide that advice.

CHAIR: That's good to know.

Mr Kalisch: Probably the one other thing I would just add is that the data we produce and release in these surveys is not made available to ministers ahead of time. We have lock-up arrangements, particularly if there are market sensitive data, so we do maintain that separation right to the end point.
Senator GALLACHER: I want to go to the Northern Territory population count. It seems like a fairly complex sort of issue. Can you talk us through how remote populations, particularly in the Northern Territory, are calculated. Is someone able to take me through that?

Dr Jelfs: Thank you for the question. For the Northern Territory, like other states and the ACT, we estimate populations regularly using a number of inputs. We use the information on births and deaths, which we receive from the registrars of births, deaths and marriages, and we also collect information from Home Affairs on the migration arrangements, both in and out. Then we also use the census to help us baseline data, in combination with the Post Enumeration Survey which follows the census, which provides us effectively a quality check on the census count as well. By combining each of those elements we are able to estimate populations in each of the states and territories at that stage.

Senator GALLACHER: That is common to the whole of Australia?

Dr Jelfs: That is common to all of them. Northern Territory provides a couple of challenges in some ways, because of the number of remote communities, difficulties in collection, slightly lower response rate to the census.

Senator GALLACHER: How many remote communities do you need to survey?

Dr Jelfs: I don't know off the top of my head; I would have to take that on notice.

Senator GALLACHER: It would be hundreds.

Dr Jelfs: Yes, it would be a large number.

Senator GALLACHER: And that is outside of small towns; this is literally hundreds of communities.

Dr Jelfs: Discrete communities, outstations, all sorts of combinations of settlements. That provides a challenge for the collection of that data from the census perspective but it also provides a challenge for the Registry of Births, Deaths and Marriages in the Northern Territory in that they have to try to capture information on births and deaths, and they rely on community notifications to come through to assist in that respect.

Senator GALLACHER: We have established that it is common throughout Australia but Northern Territory has particular challenges. What are the sampling and non-sampling methodologies?

Dr Jelfs: Because we rely on administrative data, that takes out the sampling sorts of errors for the most part. Having said that, the census is like a very large survey, so there are some response issues that we have to adjust for. One of the ways we do that is, after each census, we run a survey which is called the Post Enumeration Survey, or PES for short, and we use that to look at adjustments that we need to make to population counts. We effectively go out and do a very short interview with various households that we select right across Australia. We ask them whether they completed the census form and, if so, how the data they can give us today compares with the data they gave us on census night. We are able to compare that and make adjustments using that Post Enumeration Survey to then help our count in the long run.

Senator GALLACHER: You do that Australia-wide.

Dr Jelfs: Yes, that's correct.
Senator GALLACHER: How does that relate to the particular circumstances in the Northern Territory?

Dr Jelfs: We apply the same methodology. Again, it is much more challenging to reach out to remote locations. We get much better response rates in Darwin and the surrounding urban areas. Again, it is a challenge in other parts of the Territory.

Senator GALLACHER: You do actually go to those remote locations.

Dr Jelfs: Yes. Some of our survey is conducted using face-to-face arrangements; some of it is on a telephone basis. We use multiple methodologies to try to capture that information.

Senator GALLACHER: Does the Northern Territory government—seeing that population is used for calculations of things like GST—have any view on this sampling?

Dr Jelfs: Yes. We are in constant contact with Northern Territory governments. In fact a lot of my team at the moment are working with each of the states and territories through a conference in Brisbane where we compare note about methodologies and quality of data sources. We have regular discussions with government about the quality of population estimates. But we also have discussions with the government, particularly the Northern Territory government, around the upcoming census. We have a memorandum of understanding which we have recently signed, where we look to share information on how we will go about conducting the next census. It also gives us an opportunity to talk about how the Northern Territory government might assist in providing on-ground information that will help the census run. It also provides us information about some of the circumstances that might affect the flow of information through the Registrar of Births, Deaths and Marriages for the births and deaths data.

Senator GALLACHER: Obviously, Dr Jelfs, you understand that I barely understand my questions. Can you give us the scale of sampling and non-sampling errors?

Dr Jelfs: I think they're irrelevant in this circumstance, because we're not talking about surveys.

Senator GALLACHER: Have non-sampling errors been looked at anywhere else in the world? Is it a common thing around the world for counting—

Dr Jelfs: For surveys, yes, absolutely. We do know that there are non-sampling errors. For example, if we were measuring an Aboriginal population versus a non-Aboriginal population, in circumstances where the registrar is registering a death we might seek to understand whether that person has an Aboriginal background. That person is obviously not there to respond, so we rely on the family, friends or other notification officers to make that call. That's an example where somebody may incorrectly put an Aboriginal status flag on that person, whereas, if they were there themselves, they might choose otherwise. That's an example of an error that may be made in administrative collection.

Senator GALLACHER: Has there ever been any attempt in Australia to physically count small Indigenous communities, with small-scale and very detailed counts? I can think of the APY lands, where there are, I think, six communities and 2½ thousand people, and they might all be in one community at one time.

Dr Jelfs: I might refer that question to Chris Libberi, who's in charge of the census, because he can give you a sense of how the census operates in those small communities.
Mr Libreri: The census is not a survey, so we collect data from every household, dwelling and place in Australia. In remote Australia, we put in place particular strategies. We've done this for a number of censuses now. We work with other government agencies, including territory governments, to ensure that we have a list of all of the communities that you mentioned earlier. There are some 2,000 remote communities across the country. During the course of the census, we visit each and every one. Some we're able to do quite readily, as they are close to another urban centre. But we use what we call remote area mobile teams—we actually had over 100 of these teams in the last census—and we intend to do this for the 2021 census as well. These teams go to each community to conduct the census. In the lead-up to the census, we visit each community to publicise the fact that the census is going to occur. We try and employ local people within those communities to assist in the running of the census. This gives us a very comprehensive coverage.

It's not a survey. We aim to collect data from everybody. But, as you could well understand, it takes time to get around to each of these communities. At that time of the year, the middle of the year, in the dry season, there's a high level of mobility across various parts of northern Australia, in particular. So we do understand that there's difficulty in doing this. We actually modelled this approach on the approach the Electoral Commission use and the way that they conduct elections using mobile teams. It's only with the assistance of other agencies and the Northern Territory government that we're able to conduct the exercise on that basis.

Senator GALLACHER: Notwithstanding all of the excellent work that you do—and you've mentioned the Electoral Commission—there's still not a high take-up, in certain areas, on the electoral roll in Indigenous communities. Getting people with low levels of English language literacy to fill out an English-language form is probably always going to be problematic. But what you're saying to me is that you actually put in a physical person, similar to how we used to have someone knock on the door to say, 'Census form. I'm coming back next Tuesday to pick it up.'

Mr Libreri: That's absolutely correct. We do that in remote communities. We actually interview in remote communities. That's why it's teams. Wherever possible, we will use a local person who's an interpreter who talks the local language and is a member of that community. We find that that is the best way to get a response. The locals certainly know who's there and who's not and who's in various other places, and that assists us with the count as well. We don't use the electoral roll at all.

Senator GALLACHER: You use a variety of sources: birth, death, marriages and whatever?

Mr Libreri: Not for the census. We go to the community to count everybody who's in that community and every dwelling within it.

Senator GALLACHER: The only question that remains is: how do you deal with the mobility factor of people moving around in the dry season?

Mr Libreri: That's the process Dr Jelfs was talking about. When we translate the collected data, whether it be from the census or administrative collections, and translate that into an estimate of resident population, we can get some measure of mobility, because we have other
data—administrative data, even things like phone connections and things like that that assist us to make an estimate of the resident population—that accounts for things like mobility.

**Mr Kalisch:** There are some people that we might count twice over that census collection, and then there are some people who we miss. So we make estimates of both of those groups.

**Senator GALLACHER:** Would you be able to give an estimate of the probability of the extent to which the data is right? Is it P70, P80 or P90—a probability of 70, 80 or 80?

**Mr Kalisch:** It's well over 90.

**Senator GALLACHER:** You think it's over 90 per cent?

**Mr Kalisch:** Yes. We get around a 95 per cent response rate to the census. Now, for the Indigenous population, it's not of that dimension. But the reality is that we had a net undercount of 1.4 per cent in the 2016 census, so it's pretty accurate; it's world class.

**Senator GALLACHER:** And no-one in the world does it better.

**Mr Kalisch:** We always try to work with others across the world. We work with those who undertake census collections. We also work with demographers internationally to make sure that our techniques and methods are world leading. There are a number of countries, such as Canada, who face similar geographic and ethnic challenges to those we do, so we particularly engage with a number of those countries.

**CHAIR:** I think that may be all. Any further questions for the Australian Bureau of Statistics? If not, you go with our thanks.

**Infrastructure and Project Financing Agency**

[11:23]

**CHAIR:** I welcome officers from the Infrastructure and Project Financing Agency. Ms Frew, do you have an opening statement?

**Ms Frew:** I do, thank you, Chair, if I can take the committee's leave to do so.

**CHAIR:** As long as it's not too long, go ahead.

**Ms Frew:** I promise it won't be long. Because it was the first time that we were appearing before this committee, I felt that perhaps a short introduction of me and the agency might be helpful. I've had a career that has spanned about 25 years across infrastructure, finance and advice. I've held a number of positions both in the public and the private sectors. In particular, prior to joining APFA, I held quite senior positions in the New South Wales government around providing commercial and financial advice to the New South Wales government in respect of their infrastructure delivery program. In my private sector career, I've been working predominantly in global and domestic banks and financial institutions, providing the same sorts of advice to governments and private organisations.

IPFA is an independent executive agency. We were established on 1 July 2017, with a distinct role of trying to support the Australian government implement its decisions and deliver on its infrastructure priorities. Reflecting our whole-of-government focus, we were located within the Treasury portfolio earlier this year. In our first couple of years of existence, we've provided advice on over $55 billion of the government's infrastructure projects that Commonwealth money is going towards, and, over the last year, we've responded to about 100 requests for advice from our client department agencies to support them. There are about
11 agencies that we've done work for over the last year or so. The diversity of those requests reflects our whole-of-government service offering and the breadth of the commercial and financial advice that we help our Commonwealth colleagues with in terms of delivering infrastructure and complex commercial arrangements.

I am really proud of our diversity, the capability of our organisation and the achievements that we've had to date. We have worked, for example, with the department of infrastructure in respect of their Inland Rail project, supporting them specifically in providing advice around PPPs that ARTC are looking to put in place. We've supported the department of infrastructure in a number of their notable City Deals, in particular the Western Sydney City Deal, but we've also done work for departments such as Home Affairs and helping them with their critical disaster mitigation framework that they put out earlier this year. We've also worked with the Department of Finance and the shareholding departments of Snowy 2.0, looking at some of their decisions there and helping them implement those. So I'm very pleased to be in front of this committee and looking forward to assisting you with any questions you have today.

CHAIR: Welcome.

Senator McALLISTER: Your minister at the moment is Mr Tudge—is that correct?

Ms Frew: Correct.

Senator McALLISTER: How much direction do you get from your minister?

Ms Frew: We've only been in the portfolio since August this year. We've had two engagements with the minister, largely around helping the minister understand the depth and breadth of work that we are engaged in and undertaking across the Commonwealth. At this point, we haven't had any explicit direction from the minister.

Senator McALLISTER: So no formal ministerial direction has been provided to you to date?

Ms Frew: No.

Senator McALLISTER: I do appreciate that it's early days; you've met twice. Has the minister approved your work program or provided direction about which projects you should be involved in?

Ms Frew: No.

Senator McALLISTER: Is it your expectation that some formal agreement about your work program will be reached with the minister at some point in the future? Have you been asked to prepare a document that he could engage with in that way?

Ms Frew: That could be an outcome that does happen. Most of our work tends to be generated from the departments themselves. So, if a department has the responsibility to deliver the Commonwealth's contribution to a major infrastructure project, they may seek our specialist advice to help them work through some of the issues and risks around providing that contribution. Our advice then supports the department in implementing the government's decisions. So most of our advice, predominately all of our advice, goes to the departments.

Senator McALLISTER: Can you explain why your organisation was moved from the infrastructure department to Treasury on 8 August?

Ms Frew: No, I can't. That was a decision of government.
Senator McALLISTER: Have any reasons been provided to you for that decision?

Ms Frew: No.

Senator McALLISTER: When the organisation was first established, I asked a series of questions at that time in Prime Minister and Cabinet. I observed that the agency has been variously located in Prime Minister and Cabinet, then the department of infrastructure and now in Treasury. I think I asked Dr Kennedy this actually—what is the difference between what you're doing and what Infrastructure Australia is doing, and how do you manage any overlap in your work program?

Ms Frew: We and Infrastructure Australia have two distinct and different roles in providing advice to government. Infrastructure Australia is probably best placed to talk about what their specific role is, but from our perspective we see Infrastructure Australia providing advice to government on infrastructure projects that the government may decide to support and put Commonwealth funding towards. Once government makes a decision that there is an infrastructure project that the Commonwealth should support, we provide advice to the responsible agency and, indirectly, the responsible minister for that project on what is the best way for the government to implement its decision and what arrangements it can make in respect of that funding contribution or other contribution the Commonwealth may be putting in place.

Senator McALLISTER: You mentioned earlier that your workload is generally generated by agencies seeking advice or support.

Ms Frew: Correct.

Senator McALLISTER: When you provide advice to another agency in government, do you need to have that advice considered by the minister before you provide it, or do you go directly?

Ms Frew: We go directly.

Senator McALLISTER: Okay. I don't have any further questions there, but I think Senator Gallacher has some.

Senator GALLACHER: Yes. Could we go to the Inland Rail project. You know a bit about that, I take it. IPFA is supporting the ARTC on the Inland Rail project, with the intermodal terminals in Queensland and Victoria and the public-private partnership from Toowoomba to Kagaru—is that correct?

Ms Frew: We have been involved with supporting ARTC in the early days, particularly in helping them establish their dedicated project team that is delivering the Inland Rail PPP. That is correct.

Senator GALLACHER: So you're working on the intermodal terminals in Queensland and Victoria and the public-private partnership?

Ms Frew: We're currently not working on anything specific in terms of the public-private partnership, because that is a procurement process that's being undertaken by ARTC and the Inland Rail team. We're available to support them if they want to seek any particular advice about the PPP, given that we have PPP expertise in our organisation. In respect of Inland Rail terminals, we have provided advice previously to the department of infrastructure about how
intermodal terminals could be developed in both Melbourne and Brisbane. We're currently not
doing any detailed work on intermodal terminals.

**Senator GALLACHER:** Just to be very clear, you've given advice on the intermodal
terminals in Queensland and Victoria, but you're not involved in the PPP's procurement
process?

**Ms Frew:** We are not directly involved in delivering the PPP. That's the role of the Inland
Rail team of ARTC.

**Senator GALLACHER:** What do you advise them in respect of the intermodal
terminals? Do you say, 'This is how they work elsewhere in the country or elsewhere in the
world'? ARTC would be familiar with intermodal terminals anyway, wouldn't they?

**Ms Frew:** I would need to defer to ARTC about what they may or may not be familiar
with in terms of intermodal terminals.

**Senator GALLACHER:** Well, they run the tracks, don't they? I've driven past them. I've
seen them. They run terminals. So what specific advice would they need from you about
intermodal terminals?

**Ms Frew:** We are commercial and financial advisers, so we have expertise in how you
can bring private investment into major infrastructure projects, on what terms and conditions
that investment could potentially be brought in, and how projects could be developed and
constructed in a way to make sure that we meet not just the objectives of
inland rail, in this
particular example, but also the broader objectives we're trying to achieve.

**Senator GALLACHER:** The biggest terminal proposal at the moment is Moorebank.
That's a case study for anyone who wants to do something. So why would you need another
layer of advice on these sorts of things?

**Ms Frew:** As I said before, that's the advice that we provide. If we're asked to provide that
advice, we're very happy to support government and the department in providing that type of
advice. If they choose to seek advice from others, I leave it to them to provide it.

**Senator GALLACHER:** What about the broader business plan that ARTC have? Have
you provided advice on that?

**Ms Frew:** No, we do not.

**Senator GALLACHER:** Do you charge for your services?

**Ms Frew:** I wish! We don't have a fee-for-service explicit model. There are times when
agencies have been prepared to reimburse us for the cost of seconded staff into the client
agency departments when we put people in there for four or six months to help them develop
the particular initiatives that they are pursuing. We have had instances where agencies have
reimbursed travel costs for us as well—that is, where they've been quite extensive in being
able to undertake our advisory work.

**Senator GALLACHER:** Having dealt with ARTC over a number of years in the rural
and regional affairs and transport committees, I'm trying to get a sense of whether they seek
you out or you seek them out.

**Ms Frew:** For ARTC specifically, we put one of my senior staff members into the
organisation very early up in the PPP process. We seconded him into ARTC to help them
establish their PPP team. I don't recall who rang who, but it was a mutually agreeable
arrangement.

**Senator GALLACHER:** On Monday, Infrastructure estimates officials told the Senate
that the ARTC will repay the equity injected into the Inland Rail over 42 years. Is that
something you've been involved with, in calculating or advising on?

**Ms Frew:** We haven't been involved in respect of that to date. Again, if we were asked to
review that and provide that advice, certainly that's what we're here for.

**Senator GALLACHER:** So you did an analysis of their position there and you concur
with it?

**Ms Frew:** We could deal with it. We have not provided any advice on that aspect to date,
but, if we were asked by the agency or the department to do so, we certainly could assist them
in that.

**Senator GALLACHER:** All right. That about finishes my questions on Inland Rail. I
could ask you about your relationship with Infrastructure Australia. What's that like?

**Ms Frew:** Very well. I was actually talking with the CEO this morning before coming up
here.

**Senator GALLACHER:** Are you competing or are you complementary? What's the deal
there? Infrastructure Australia has been around a long time.

**Ms Frew:** They have. We're complementary. As I mentioned, they focus on enabling
government to make decisions about what projects could best be supported by
Commonwealth funding. Once government makes that decision, we advise the government
and the Commonwealth department agencies on how they could implement that by bringing
commercial advice to assist them, so we're complementary We don't crossover. We're very
aware of each other's businesses and how they provide that holistic support to government,
but we're different.

**Senator GALLACHER:** So there's no overlap. There's no competition. You're
complementary organisations.

**Ms Frew:** Correct.

**Senator McALLISTER:** I just have a couple of quick questions about the structure,
organisationally. You answered a question on notice in relation to the staffing levels and said
that you had 14.6 APS staff and three contractors.

**Ms Frew:** Correct.

**Senator McALLISTER:** Does that remain accurate? It is a fairly recent answer, but I just
want to confirm that that's correct.

**Ms Frew:** In terms of bodies, I know 4.6 is more around their working arrangements.

**Senator McALLISTER:** 14.6, yes.

**Ms Frew:** In terms of bodies, we've got one 21 people that work for our agency, even
though their working arrangements might be part time or otherwise. There are three
contractors.

**Senator McALLISTER:** In addition to the 21?

**Ms Frew:** Inside the 21.
Senator McALLISTER: So there are 18 APS staff, which is the equivalent of 14.6 full-time positions.

Ms Frew: Yes.

Senator McALLISTER: And then three contractors.

Ms Frew: Correct.

Senator McALLISTER: From the website, it seems that there's a leadership team of six—a CEO, four managing directors and a director—so that gets you to something like just under a third of the entire team in the leadership team. How many staff does each managing director manage?

Ms Frew: Between two and five, depending on the business unit that they run.

Senator McALLISTER: You have the CEO and then you have four managing directors and a director sitting under you, all reporting directly to you?

Ms Frew: Correct.

Senator McALLISTER: And then each of those people managing between two and five people. So, very small teams.

Ms Frew: Correct.

Senator McALLISTER: Is it a little top-heavy? I am just going to ask directly: it looks a bit top-heavy to me.

Ms Frew: As an executive agency we have a corporate part of the business that we need to maintain—the part that looks after our people, our performance, our financial and our reporting requirements as an executive standalone agency. In terms of the rest of the business, which is advisory, predominantly, yes, we have the three contractors as our senior experts, but that is quite a large part of the expertise that we are bringing to the table.

Senator McALLISTER: How big is the corporate team?

Ms Frew: There are four.

Senator McALLISTER: Do they report to a managing director or a director?

Ms Frew: It is four, including the director.

Senator McALLISTER: Do they report directly to you?

Ms Frew: No, the director reports to me and three report to the director.

Senator McALLISTER: So there are three in the team. Then you have the three contracted experts. Are they sitting within a team or reporting directly to you?

Ms Frew: Each of those reports to me.

Senator McALLISTER: Directly.

Ms Frew: Yes. And they look after between two and five people, depending on the team.

Senator McALLISTER: So each of the people in those managing director roles is also one of the contractors that you referred to in your answer to the question on notice.

Ms Frew: Correct.
Senator McALLISTER: Could you please provide the details of the contracts that have been entered into with those personnel? Are they being provided by a single consultancy, or are they single-shingle providers?

Ms Frew: Each of those contractors would be classified as a sole trader. They are contracted through those contracting arrangements for sole traders.

Senator McALLISTER: There is a procurement process for sole traders?

Ms Frew: Correct.

Senator McALLISTER: Is that an open tender, a limited tender, or—

Mr Brummitt: They are procured under a limited tender process, with a relevant exemption under the Commonwealth procurement rules, due to the people we are recruiting being classified as contract for labour hire, which is division 2, appendix A, item 14. That essentially is the way we utilise the CPRs in the limited tender procurement that we run.

Senator McALLISTER: That is very helpful and circumvents a whole lot of other questions I might have had to ask you about it. So, for each of these three contractors you are using division 2, appendix A, item 14 in the procurement arrangements.

Mr Brummitt: Correct.

CHAIR: Thank you very much for appearing here today. You go with our thanks.

National Housing Finance and Investment Corporation

[11:44]

CHAIR: Welcome. Mr Dal Bon, did you wish to make any opening remarks?

Mr Dal Bon: No, thank you.

CHAIR: Can you give us a very quick update on where we are at with the bond aggregator?

Mr Dal Bon: In terms of the bond aggregator function you are referring to, the NHFIC has two functions, one being the bond aggregator and the other being the infrastructure facility. With respect to the bond aggregator, we had our first bond issued, in March, for $315 million. Since then we have been working towards the next bond assurance. To date we have $578 million in loans to CHPs, with $540 million closed. We are expecting that would work towards the next bond issuance before the end of next year—approximately around the same size, hopefully around the $300 million mark, subject to those transactions closing. In terms of the issuance price, we priced around 48 basis points above Commonwealth government securities, so it is quite a sharp pricing outcome for 10 year bonds. We essentially passed those funds through to community housing providers, plus a margin to recover our costs as an organisation.

CHAIR: Is that on track? Is it ahead of where you are expected to be? Can you give us some sense of how that initial bond release was approached by the market?

Mr Dal Bon: Certainly the first bond issuance was four times oversubscribed, in terms of the investor order book. There was very strong interest, particularly given that it was labelled a social bond. It had high-quality liquid asset status, repo eligibility. It was AAA, obviously. So there was very strong demand from investors, and having that premium above the Commonwealth government security bond rate was very attractive to investors. Looking
forward, we anticipate there will continue to be strong demand. Certainly the advice we have from our joint lead advisers suggests that there will be strong demand going forward. I think in terms of where we expected to be at this point in our establishment phase—because we are still going through building up the organisation—we are certainly a little bit ahead in terms of where we anticipated we would be in terms of the size of the bond issuance. Initially, when we went out in March with the $315 million bond, we were probably thinking that in 12 months time we would be coming back and accessing the market again. I think the demand we have from community housing providers would allow us to access the market sooner than what we anticipated.

CHAIR: Do you have a timeframe in mind? What is the process to making that decision?

Mr Dal Bon: In terms of bond issuance?

CHAIR: Future issuance, yes.

Mr Dal Bon: Basically there are a couple of considerations. This is all subject to advice we have from joint lead managers. But essentially the borrowing window—we have a look at what's happening in terms of remittances, in terms of other bonds that are maturing at that time. Also other bonds that may be released and, obviously, the borrowing environment in general in terms of the interest rate window. And fundamentally it also points to the level of demand we had from community housing providers. The advice we have is that you typically want to look at a minimum of $200 million, from the bond issuance point of view. But given that, at this stage, we have a larger pool of transactions on our books we are probably thinking about 300 or thereabouts, subject to where we land on some of these transactions that are still to reach financial close.

Senator GALLACHER: Is there an attraction to this type of investment from ethical investors and super funds and the like?

Mr Dal Bon: Yes.

Senator GALLACHER: Is that where the oversubscription is coming from?

Mr Dal Bon: It's a range of factors. You have your standard funds that in some cases have dedicated social mandates—they have a pool of funds that is set aside. Then you have ethical investors that are basically looking for investments that align with their objectives. So I think the social bond status has really assisted in terms of generating demand.

Senator GALLACHER: It sounds like an excellent story. I've got a long series of questions, but I think they are going to be pretty straightforward. Have you released a draft investment mandate?

Mr Dal Bon: That's with government, Senator.

Senator GALLACHER: It's with government—so you'll get it back from them and then release it. Is that how it works? Or do they release it?

Mr Dal Bon: It's the minister and the Department of the Treasury that support the minister with respect to the investment mandate. We are the implementing agency.

Senator GALLACHER: So they release it and give it back to you and the rest of the world.

Mr Dal Bon: We've obviously been inputting into that process. Now it's with the minister and the department in terms of the finalisation.
**Senator GALLACHER:** Do we have any indication of when it may be released?

**Mr Dal Bon:** That's a decision for the minister and for government.

**Senator GALLACHER:** But we're enacting this legislation on 1 January, aren't we? Is that right?

**Mr Dal Bon:** Well, the legislation has passed. The scheme is due to start on 1 January.

**Senator GALLACHER:** In all of the deliberations that you've undertaken, did you actually advise the government that the program would increase the number of first home buyers?

**Mr Dal Bon:** We're an implementing agency, Senator.

**Senator GALLACHER:** Has the government sought advice from NHFIC as to whether the program will increase the number of first home buyers?

**Mr Dal Bon:** Our focus has been on implementation.

**Senator GALLACHER:** Has the department provided advice to the government on price caps for properties?

**Mr Dal Bon:** Yes, we've engaged with the department with respect to that question.

**Senator GALLACHER:** How did you deal with the different regions? Are there different caps for different regions?

**Mr Dal Bon:** That would be a decision for government.

**Senator GALLACHER:** But was your advice to have different caps in different regions?

**Mr Dal Bon:** I don't think it goes to that particular question. I think the decision for government has been at what level they set the house-price thresholds.

**Senator GALLACHER:** So the mandate encompasses all of this capping and the regional aspect to it. Is that right?

**Mr Dal Bon:** That would be a decision for government.

**Senator GALLACHER:** Are you able to shed any light on what the price caps may be?

**Mr Dal Bon:** I'm not, Senator.

**Senator GALLACHER:** Has the department provided advice to government about regional allocation caps?

**Mr Dal Bon:** I don't know, Senator. You'd have to ask the department that.

**CHAIR:** I think you did, in fact, Senator Gallacher—you did ask them.

**Senator GALLACHER:** That one snuck in—it must have been a cut-and-paste! So you're not able to give any further information about regional allocation caps and the like, is that right? That's outside your purview.

**Mr Dal Bon:** No, Senator.

**CHAIR:** Can I just ask a question on the regional issue, on the bond aggregator role: do you get a sense of the geographical distribution of where the properties end up?

**Mr Dal Bon:** Yes, we do.

**Senator GALLACHER:** Do we know which loan providers—that is, banks—have been successfully approved under the scheme?
Mr Dal Bon: To date, we've had a market-sounding exercise. That process has concluded, and the information that came out of that market-sounding exercise will help inform a procurement process that NHFIC will conduct to determine the panel of lenders.

Senator GALLACHER: Are you not able to name them?

Mr Dal Bon: That procurement process hasn't started yet.

Senator GALLACHER: I suppose the burning question will be: is there anybody other than the big four in that procurement process? You're not able to say, is that what you're saying?

Mr Dal Bon: We haven't started the procurement process yet, Senator.

Senator GALLACHER: Do you expect the scheme to be oversubscribed, with 10,000 places?

Mr Dal Bon: I think there are a variety of views in terms of how much demand there will be, and there are a lot of factors that influence a first home buyer's decision to purchase a home and whether they want to access this particular scheme. So I think it's one of those things where we're just going to have to see how it unfolds.

Senator GALLACHER: I think the evidence was that there were 100,000 first home buyers, or thereabouts, a year. Do you have any indication that there is a bit of a pause at the moment? Do those numbers get reported monthly or quarterly?

Mr Dal Bon: I only have the annual figures at hand. Treasury monitor those releases more closely than I do. Certainly if you look at the annual first home buyer number, it does move around. The latest figure was, I think, 110,000.

Senator GALLACHER: If it was 90,000 at the conclusion of this year, maybe it's because people stopped and waited to get a place in this new scheme. It's a possibility.

Mr Dal Bon: When you run through the different possibilities in terms of the pool of potential scheme applicants, there certainly could be some who would be deferring a purchase. There will be some who are bringing forward a purchase, and there are some who would have been in a position to purchase but might have been using a variety of means to be in that position.

Senator GALLACHER: Should the scheme be oversubscribed, is there any possibility of moving to more than 10,000 guarantees in that calendar year?

Mr Dal Bon: My understanding is that the government has set the cap at 10,000.

Senator GALLACHER: So if we go into 2020-21 and they only did 90,000, would they do an extra 110,000 the next year?

Mr Dal Bon: Sorry, Senator?

Senator GALLACHER: If we got to 2020-21 and only 90,000 people had taken it up in 2020, would they do 110,000? Is it an over and under scheme? If there are 10,000 places and only 9,000 take it up, are they—

Mr Dal Bon: It is 10,000 per year, as I understand it.

Senator GALLACHER: With no rolling aggregate number?

Mr Dal Bon: That's not my understanding.
Senator GALLACHER: Once you get this investment mandate back to you, how will you do it? Will there be an enormous queue on your doorstep from 1 January?

Mr Dal Bon: It's a good question in terms of how we do it, and it is something that we've been—

Senator GALLACHER: If there is a big queue around the block, does the first one who knocks on your door get in? How will it work?

Mr Dal Bon: Obviously the first step is to have the investment mandate finalised. We need to have clarity around the house price thresholds. That impact on the degree of demand as well. We know what the income thresholds are. We, as in the NHFIC, have to focus on implementing on 1 January. I think at that point we will start to see the sort of demand coming through.

Senator GALLACHER: I suppose the question is: is it first in, best dressed or is it those in most need?

Mr Dal Bon: I think the government's stated objective is to try and assist first home buyers in terms of bringing forward their purchase. I don't think those two concepts are necessarily mutually exclusive. There can be an element of first in, first served, but also looking for ways to try and prioritise who gets through the door.

Senator GALLACHER: I think Minister Cormann said yesterday that the intent is to bring into the market people who may not have been able to get there.

Mr Dal Bon: That's right.

Senator GALLACHER: That sort of tends towards a needs basis rather than a first-in basis.

Mr Dal Bon: We are going through these design issues now to determine how we can have the scheme up and running on 1 January. We will have in place some monitoring in terms of the profile of first home buyers that come through the door. We are working on those issues now. Then I think we can reflect on the profile that we see coming through and, if necessary, we can fine-tune.

Senator GALLACHER: How will you deal with off-the-plan purchases, given guarantees may not be spent in the same year they are approved?

Mr Dal Bon: We anticipate that's one issue that the investment mandate will cover. We are certainly aware of the issue with respect to construction and off the plan and the particular issues that relate to those types of purchases.

Senator GALLACHER: So you think the investment mandate will cover that off?

Mr Dal Bon: We will have to see, but the government and NHFIC are certainly conscious of the issue.

Senator GALLACHER: Following on from that, would it be possible for an applicant to receive the guarantee in one year but initiate it in the following year? Does it have to be initiated in the year of approval?

Mr Dal Bon: We've had a market sounding exercise. Part of that process has been developing our understanding of the customer experience that transpires throughout that loan, from preapproval right through to settlement stage. We've been looking at trying to address a
number of issues with respect to implementation. That particular issue is something that we have been focused on in terms of looking for a solution. I think the key thing is that, when someone puts a deposit down for a property, they have the confidence that they have the guarantee or they don't have the guarantee.

**Senator GALLACHER:** I have a number of questions here that go to what you may have provided to the government. You can just say yes or no. Have you provided advice about the 10,000 cap? Is that appropriate from your organisation's point of view? Is that the right number? Why not 9,800 or 12,200?

**Mr Dal Bon:** No.

**Senator GALLACHER:** So the 10,000 is simply a decision of the government. Have you sought advice from any other agencies about that number?

**Mr Dal Bon:** No.

**Senator GALLACHER:** Have you provided the government with any advice about the macroeconomic risks of the scheme?

**Mr Dal Bon:** No.

**Senator GALLACHER:** Do you think that there are any macroeconomic risks from this scheme?

**Mr Dal Bon:** Can I clarify what you mean by that?

**Senator GALLACHER:** Is it going to drive up house prices? There is media around that says the first home buyer scheme will inevitably drive up house prices. Even with the best intentions of policymakers, some people argue that it actually is counterintuitive and puts the price up.

**Mr Dal Bon:** No, we haven't provided that advice, but I think those issues are covered off in the explanatory memorandum to the amendment.

**Senator GALLACHER:** Would you normally provide information to the government about housing affordability? Is that part of your mandate or role?

**Mr Dal Bon:** It is now. With the amendments that were recently passed by parliament, we'll have a new research function that will look into housing affordability issues from a supply-and-demand perspective.

**Senator GALLACHER:** That's me done, Chair.

**CHAIR:** NHFIC can go with our thanks. We will keep rolling through the program. Minister, thank you very much. We will move to the Industry, Innovation and Science portfolio.
INDUSTRY, INNOVATION AND SCIENCE PORTFOLIO

In Attendance

Senator Matthew Canavan, Minister for Resources and Northern Australia
Senator Jane Hume, Assistant Minister for Superannuation, Financial Services and Financial Technology

Department of Industry, Innovation and Science

Executive

Ms Elizabeth Kelly, Acting Secretary
Mr David Williamson, Deputy Secretary
Mr Mike Lawson, Deputy Secretary

Analysis and Insights

Mr Russell Campbell, Head of Division
Ms Melissa Bray, General Manager, Economic Advice Service
Mr David Turvey, General Manager, Insights and Evaluation

AusIndustry—Industry Capability and Research

Mr Duncan McIntyre, Head of Division
Ms Joanne Mulder, General Manager, Research and Development Tax Incentive Program
Ms Sue Cattermole, General Manager, Centre for Defence Industry Capability
Ms Veronica Heard, Acting General Manager, Industry Research and Investment

AusIndustry—Support for Business

Ms Charlotte Tressler, Head of Division
Ms Claire Forsyth, General Manager, Grants Advisory and Enabling Services
Ms Emma Greenwood, General Manager, Entrepreneurs’ Program
Ms Jennifer Kay, General Manager, National Outreach and External Grants Administration
Ms Annie Ryan, General Manager, Department of Industry, Innovation and Science Grants Administration
Ms Lisa Hind, General Manager, Service Strategy and Governance

Australian Building Codes Board

Mr Trent Bourne, Chief Operating Officer
Mr Matthew McDonald, Team Leader, Building Confidence Report Implementation

Australian Space Agency

Dr Megan Clark AC, Head
Ms Anntonette Dailey, Acting Deputy Head

Corporate

Ms Janean Richards, Chief Operating Officer
Ms Rebecca Lee, Chief Information Officer
Mr Sam White, Acting Chief Financial Officer
Mr Steve Stirling, General Manager, ICT Operations
Ms Janice Wykes, General Manager, Ministerial and Shared Services
Ms Erika Taduran, General Manager, Financial Services
Mr Michael Olive, Acting General Manager, Budgets, Property and Accounting
Mr Ameet Jamble, Acting General Manager, People and Planning
Mr Maris Stipnieks, General Counsel, Legal, Audit and Assurance
Ms Virginia Dove, Acting General Manager, Communications
Ms Kimberley Shrives, Executive Manager, Ministerial Liaison Office

**Digital Economy and Technology**
Ms Narelle Luchetti, Acting Head of Division
Ms Louise Talbot, Acting General Manager, Tech Lab
Mrs Rachel Frost, Acting General Manager, Strategy

**Industry Growth**
Mr Trevor Power, Head of Division
Mr David Lawrence, General Manager, Sectoral and Place Based Policy
Mrs Donna Looney, General Manager, Advanced Technologies
Ms Judith Blake, Acting General Manager, Industry Transition
Mrs Rebecca Manen, General Manager, Business Facilitation and Food Policy
Mr Rodney Harris, Manager, Building Industry Policy

**National Measurement Institute**
Dr Bruce Warrington, Chief Executive Officer and Chief Metrologist
Ms Ann Bray, General Manager, Engagement and Business Development

**Northern Australia and Major Projects**
Ms Sam Reinhardt, Head of Division
Ms Sam Chard, General Manager, Radioactive Waste Taskforce
Mr Nick Purtell, General Manager, Major Projects
Mr Mark Coffey, General Manager, Office of Northern Australia

**Office of Innovation and Science Australia**
Dr Charles Day, Chief Executive Officer
Dr Kate Cameron, Chief Operating Officer

**Questacon**
Professor Graham Durant, Director
Dr Bobby Cerini, Deputy Director and General Manager, Science and Learning
Ms Sally D’Addio, Senior Manager, Operations

**Resources**
Mr Paul Trotman, Head of Division

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ECONOMICS LEGISLATION COMMITTEE
Mr Dan Quinn, Acting General Manager, Onshore Minerals and Energy
Mr Jason Russo, General Manager, Resources Strategy
Ms Marie Illman, General Manager, Offshore Resources
Mr Graeme Waters, General Manager, National Offshore Petroleum Titles Administrator

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Dr Gino Grassia, General Manager, International Science and Innovation
Ms Michele Graham, General Manager, Science Policy
Mr David Wilson, General Manager, Commercialisation Policy
Mr David Luchetti, General Manager, Square Kilometre Array and Astronomy

Strategic Policy
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Mr Tom Munyard, Chief Finance Officer
Dr Jack Steele, Director, Science Impact and Policy

Geoscience Australia
Dr James Johnson, Chief Executive Officer
Dr Andrew Heap, Chief, Resources Division
Dr Andy Barnicoat, Chief, Positioning and Community Safety Division
Dr Martine Woolf, Acting Chief, Environmental Geoscience Division
Mr Stuart Barr, Acting Chief Operating Officer
Mr Su-Sueh Koh, Chief Finance Officer
Dr Steve Hill, Chief Scientist

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ECONOMICS LEGISLATION COMMITTEE
CHAIR: The committee will now move to the examination of the Industry, Innovation and Science portfolio with questions for the department. The hearing will then follow the order as set out in the circulated program. I welcome the Minister for Resources and Northern Australia, Senator the Hon Matt Canavan, and officers of the department. Minister, do you wish to make an opening statement?

Senator Canavan: No, Chair.

CHAIR: Ms Kelly, we do have an opening statement from you. Do you want to go through that, or are you happy to table it?

Ms Kelly: I'll go through it briefly, Chair. Dr Smith apologises to the committee that she is unable to be here today. She is travelling with the minister in the US. I reiterate that my colleagues and I are here to answer the committee's questions today. There are some organisational changes that I noted in the opening statement, the most important of which was to introduce Mr Williamson, who is the new deputy secretary responsible for corporate, science and commercialisation policy within the department. Mr Williamson is joining us for the first time at the estimates table today.

CHAIR: Excellent. We'll move straight on to questions.

Senator MARIELLE SMITH: Which minister is responsible for the commitment to develop a mandatory code of conduct that requires car manufacturers to share their technical information with mechanics?

Senator Canavan: I think, if it is a mandatory code of conduct under the Competition and Consumer Act, it would normally be the Treasurer's responsibility. We might have some officials that could help out.

Mr Power: Those provisions in relation to sharing information are in the Treasury portfolio, and I think it's the Assistant Treasurer who's managing that.
Senator MARIELLE SMITH: The Assistant Treasurer, Minister Canavan, does the government still support this code and the right of independent mechanics to access technical information at a fair and reasonable cost, notwithstanding there'd be safeguards around sensitive information?

Senator Canavan: I don't have information on that in front of me. As has been indicated, I think it would be one you'd have to put to the Treasury.

Senator MARIELLE SMITH: So this isn't the right area to be asking questions?

Mr Power: The sharing of that technical information in relation to repairs is a matter for the Treasury portfolio and the Assistant Treasurer.

Senator GALLACHER: But you could take it on notice.

Senator Canavan: We can certainly take it on notice. There is no problem with that.

Senator McALLISTER: Perhaps you could assist Senator Smith by confirming whether or not the department has any role in the development of this scheme. It does go to industry questions. It obviously goes to market function as well, but it's a key issue for the vehicle industry.

Mr Power: Yes. In particular, the issue you've raised in relation to repairs and the sharing of that information is, as we've said, a matter for the Treasurer and the Assistant Treasurer.

Senator McALLISTER: And no input from—

Mr Power: No, of course we have input, as we do in all sorts of things across government. We are working with Treasury and other portfolios on a range of matters in relation to the automotive sector. Those issues include the one that you've mentioned. There are also issues that have arisen in the franchising inquiry that has been run, and there is a task force across government that is dealing with those issues, which includes the portfolios I've mentioned and others, including Jobs and Small Business. So there are a range of issues in the space, including how franchising matters are dealt with between, for example, motor manufacturers and dealers in Australia.

Senator MARIELLE SMITH: What was the name of that task force?

Mr Power: The name of the task force, specifically—I believe it's called the franchising task force or dealing with franchising issues. We can get you the specific name.

Senator MARIELLE SMITH: Can you explain to me what the breakdown is of the functions between your department and Treasury regarding this particular code that I'm interested in?

Mr Power: Yes. Ms Manen might be able to help you with the breakdown of those functions.

Ms Manen: Given the responsibility of our department, we've been looking at issues relating to franchising arrangements between new car dealers and their manufacturers in relation to the mandatory information-sharing scheme. We have been working with the Treasury and other portfolios to make sure that the issues that we're looking at in relation to the automotive sector are coordinated and as joined up as possible.

Senator MARIELLE SMITH: Are you aware of the progress of this code and where it's up to?
Ms Manen: I'm aware that the Treasury has been consulting with relevant stakeholders, but I don't have the specific details in front of me.

Senator MARIELLE SMITH: Is it your understanding, given your agency is actually working on it, that this measure will be done through legislation or through a mandatory code under the Competition and Consumer Act?

Mr Power: I don't think we have the detail on how exactly that issue would be dealt with. I think that would be a question for the Treasury portfolio.

Senator MARIELLE SMITH: Is it something you can take on notice, or is it something I need to put to Treasury?

Senator Canavan: We can take it on notice. We're happy to take that on notice. We might have to consult with Treasury.

Senator MARIELLE SMITH: I'm also interested in when a regulatory impact statement will be released. Is that something you'd need to take on notice as well?

Mr Power: Yes, we would.

Senator MARIELLE SMITH: There's a meeting, I understand, on this matter on 29 October. Is that a meeting that your department is involved in or has been invited to?

Ms Manen: I'd need to take that on notice.

Senator MARIELLE SMITH: If you could take that on notice and let me know who else has been invited, that would be very helpful.

CHAIR: The officers were in the room—I am happy to have a bit of latitude. But do you have a corporate cross-portfolio or not? We may be able to release some officials, but if you need them—

Senator McALLISTER: It depends on your definition of cross-portfolio. I do have an extended line of questioning that I suspect will require officials from a range of different groups. Which groups are you planning to release?

CHAIR: We are in cross-portfolio; that's all. And I do like to try and keep things—

Senator Canavan: Just to clarify, in this session, most of the officials will need to stay, regardless—for other areas later. Normally, as you say, it is quite free-flowing in this section of estimates. We are comfortable with that.

CHAIR: Senator McAllister or Senator Smith?

Senator McALLISTER: I'm interested in understanding a little bit more about the Extractive Industries Transparency Initiative and where that's up to. It has been afoot for some time. I understand that the work plan and candidacy application is being overseen by this department; is that correct?

Senator Canavan: That's right.

Senator McALLISTER: And the original time frame for Australia to submit the application was 2017. Where are we up to?

Senator Canavan: It's in this department, but it is actually in the resources part of the department, so I'm just not sure. That's program 3. They are not here yet. Sorry, 2.4. They will be on tonight.
Senator McALLISTER: That's all right.

Senator Canavan: I am aware of the initiative. We remain involved in discussions with EIT in regard to that. I would need to have those officials to ask exactly where the application is up to.

Senator McALLISTER: That's all right. I think we are happy to hold that over until later. I might then just ask some of the corporate questions, given the chair's request that we move to that. What is the current level of ASL staffing at the department?

Ms Taduran: Sorry, the question was about ASL for the department?

Senator McALLISTER: It was about staffing levels. It would be useful to have them expressed as ASL, but any other metric you choose to use is also useful.

Ms Taduran: Our current estimated staffing level for the department is 2,456.

Senator McALLISTER: And when you say 'estimated', can you explain to me what that qualification means in practice?

Ms Taduran: In relation to what we have in the department—

Senator McALLISTER: It's a terminology question. When you say 'the estimated staffing level', is that 'estimated at budget' or is that 'your current estimate based on what's actually happening in the department'?

Ms Richards: Just to explain, across the government, we manage average staffing level within a total ASL portfolio estimate level. The portfolios estimate for 2019-20, including a breakdown by agency, is published in Budget Paper No. 4. We work with agencies across the portfolio to ensure we aggregate our ASL estimates and that across the portfolio we remain within that ASL estimate.

Senator McALLISTER: This is managing the cap, in fact?

Ms Richards: This is managing our estimates to ensure they remain within our budget forecast.

Senator McALLISTER: Okay. So you are telling me that, within the department, not across the portfolio, the estimated staffing level is 2,456?

Ms Richards: Yes.

Senator McALLISTER: And that is as published in the budget paper? Or is that a current estimate? I suppose I'm looking for the difference between what is estimated and what is actually happening.

Ms Richards: I can probably address that. For the department, our 2019-20 ASL estimate was that figure that Ms Taduran gave you, 2,456. Our forecast at the moment for how we're tracking is about 2,430. We keep an eye on that forecast regularly. We update it, looking at ons and offs of staff. It's a pretty fluid number. So at the departmental level we're forecasting that we will come in pretty close, within about 26 of that estimate.

Senator McALLISTER: I understand. Over the last five years, have you generally met the estimate or stayed within the estimate?

Ms Richards: At a portfolio level, yes, we've stayed within the estimate. Ms Taduran can give us those figures over the last five years.
Ms Taduran: Over the last five years, the very earliest would be 2015-16. Our estimate at the time was 10,767, and for the portfolio we came in at 10,808. For 2016-17, again for the portfolio, 10,890 was the estimate; the actual was 10,550. For 2017-18, the estimate was 10,769 for the portfolio; the actual was 10,603. For the last financial year, 2018-19, for the portfolio the estimate was 11,006, and the actual was 10,671.

Ms Richards: Just to clarify, based on those figures, we as a portfolio have managed within our ASL forecast every year but the initial year, 2015-16, where it was slightly exceeded at a portfolio level.

Senator McALLISTER: Yes, so the variances aren't significant. Those are the portfolio-scale numbers. Do you have those for the department?

Ms Richards: Yes.

Senator McALLISTER: Could we have the same breakdown for the department. I'm sorry to make you go through them again, but it would help.

Ms Taduran: That's okay. The 2015-16 estimate for the department was 2,538; our actual was 2,582. For 2016-17, the estimate was 2,568; the actual was 2,448. For 2017-18, our estimate was 2,410; the actual was 2,314. For 2018-19, our estimate was 2,487; the actual was 2,271.

Senator McALLISTER: That's useful. Can I ask you to take this on notice—or you may have the figures with you. How much did the department spend on external consultants over the last financial year, 2018-19?

Ms Taduran: I think I have those figures with me. The consultancy spend for 2018-19 was $11,716,647. That's GST inclusive.

Senator McALLISTER: Do you have those numbers over the last five years?

Ms Taduran: I would have to take that on notice.

Senator McALLISTER: I understand.

Ms Richards: Senator, at page 77 of our annual report, which we tabled last week, you'll find our reporting on our expenditure on consultants for the last financial year.

Senator McALLISTER: Thanks, Ms Richards. You will understand that opposition senators across portfolios are interested in the role of external contractors in performing core government functions, and I'm interested in how many contractors are working in the department on innovation related policy.

Ms Taduran: I have numbers at a total department level. On 9 October, the department had 356 contractors. For the specifics of which ones of these were working on innovation policy, I might need to refer to my colleagues.

Mr Williamson: We might need to take that on notice. I think the majority are in the IT space, but we'll come back to you with an innovation-specific figure.

Senator McALLISTER: That would be great. Could you also come back with the IT figure, or whatever categorisation system you use to break down those contractor numbers. I am interested in who's doing policy work, who's doing administrative work and who's doing IT.

Mr Williamson: Will do.
Senator McALLISTER: Chair, I find myself in an odd position where I have a long line of questioning that I don't really want to kick off. I'm wondering if, unless other senators have questions, we might break early.

CHAIR: I think we'd all be very comfortable going to lunch four minutes early.

Proceedings suspended from 12:25 to 13:32

CHAIR: We will resume this hearing of the Economics Legislation Committee.

Australian Space Agency

Senator WALSH: These questions relate to the space industry and funding thereof. The government's made a number of funding announcements about the space industry in recent times. What is the total funding for space commitments over the forward estimates? And what proportion of that total funding for space commitments is private co-investment and what proportion is direct government funding?

Dr Clark: Let me at least start with the Space Agency programs and the funding that relates to that. There are some broader areas, but let me start with that. The Australian government has committed $190.5 million to programs that will be run through the agency with the purpose of transporting and growing the Australian space industry. In answer to your question, Senator, that $190.5 million is full government funding. That will be supported not just over the four years but there's also an additional year in there. The programs are growing Australia's space industry and the partnership with NASA.

The first one is the new announcement of $150 million to support Australia's participation in collaboration with NASA in the return to the moon and on to Mars. To be clear, that money will be spent in Australia. The second is the Space Infrastructure Fund, a $19.5 million fund that fills the gaps in Australia's space infrastructure. The third one, International Space Investment, is $15 million for strategic space projects, and this is in particular the relationships with international space agencies, opening the doors for Australian industry and researchers. As part of the development in South Australia, the Space Discovery Centre, there's an additional $6 million to develop facilities for STEM education in a facility that will be open to the public. So that's the $190.5 million that is through the agency. There have been broader announcements—did you want to take that one, Minister?

Senator Canavan: I might just add that—and other officials might add too—on top of the Space Agency, the government has also made a commitment to increase or develop satellite based infrastructure and technologies. There's $325 million of funding to Geoscience Australia in two broad streams. One is to improve the satellite technologies, and particularly GPS location accuracy. We are investing to take the accuracy of our system from, broadly, one of about five- to 10-metre accuracy to below 10 centimetres when you're just relying on the satellite network, and potentially below two centimetres when you have a mobile phone network available. I'm told that we'll have one of the more accurate systems in the world at that point, and that will be publicly available to anyone through their phone, but also, obviously, to businesses and others doing precision farming, construction, transport, mining, and lots of other applications.

The other major stream is digitising our satellite observation records. We have one of the world's largest repositories of continent-wide, detailed mapping, with pictures from satellites over about 40 years. It's previously been available on microfiche here in Canberra, but that...
process is being digitised so that it's available to businesses and others looking at land-use changes, water flows, and lots of other technologies there. There are probably some other things I'm missing as well. Geoscience Australia are on later today if you have detailed questions about those programs.

Mr Lawson: Could I add two other elements: since 2018-19, there's been $26 million to CSIRO to support space science in Australia, including $16 million for the Future Science Platform investment in space, and $55 million to support the development of new technologies for space through the SmartSat CRC.

Ms Dailey: We have outlined the programs. There's also ongoing funding for the Australian Space Agency that is part of that package. I just want to clarify that the government has actually committed about $629 million since the 2018-19 budget. That covers the $190 million that Dr Clark outlined, plus $32 million for the ongoing operations of the agency, about $325 million to Geoscience Australia, just like Minister Canavan outlined, $26 million to CSIRO and $55 million to support the SmartSat CRC. I understand your question, though, Senator, was in relation to the forward estimates. Are you looking for a by-year breakdown?

Senator WALSH: I think all of the answers collectively are sufficient, thank you. I have a bit of further questioning on the NASA Moon to Mars project. Are those funds to be administered on a grant system? Or can you tell us a little bit more about how those funds are meant to be administered?

Dr Clark: These are very early days because the Prime Minister has only just announced that commitment of $150 million. The next nine months we will spend with NASA as they share more transparency about their Artemis missions. The Artemis missions will be the missions to return to the moon—to put the first woman and the next man on the moon. They will share much more than we have ever seen before. We will also share with them areas where Australia has competitive advantage and our ideas and technology. During that nine months we will then work through where the best places are to invest that. We have identified three particular areas: first, demonstrator and pilot projects that will really showcase Australian capabilities internationally; second, working with NASA to identify how Australia could support a very significant aspect of the return to the moon and Mars, not yet identified; and, third, supporting aspects of our researchers and industry to enter the international supply chains. This can and could be with commercial companies who are partnering with NASA, not just with NASA.

In terms of the design, we have yet to design the program. We need to go through that first step of working closely with NASA and engaging with them. To that end, members of the Australian Space Agency are currently in Washington at the International Astronautical Congress and have commenced those discussions. And minister Andrews also met with the Administrator of NASA, Jim Bridenstine. So we are already starting on that process but we will not be able to answer your question until perhaps the next estimates hearing, when we can outline more detail of the design.

Senator WALSH: In relation to the industry supply chain component, is the idea there to work with businesses that will employ people in Australia?
**Dr Clark:** Absolutely. Australia's commitment to this partnership will really be spent in Australia. It will support Australian businesses to be able to showcase what they can do—and also some of our research. So this is a major collaborative effort that I think will really put Australia's flag in space and demonstrate those technologies. Once those technologies have been demonstrated in space, it opens the avenue for those industry players to also use these technologies on earth—whether it is advanced communication or robotics technologies. So it about making sure our industry can work not just in space but also in advanced manufacturing here on earth.

**Senator WALSH:** I think you said you are not yet sure whether the way in which the funds will interact with businesses in the supply chain will be on a grant model or a loan model.

**Dr Clark:** No, we haven't got to that detail. That goes to the actual design of the program. The design of the program needs to be formally approved through other agencies as well, so there is quite a long step through that. So whilst we have identified the highlight areas we have not gone to the design. The design stage also involves consultation in the states and territories, which is what we do with our programs. And we need to step through all of those aspects to hear as well from industry whether our draft design is meeting the needs. So we will step through those processes and be ready to invest the funds.

**Senator WALSH:** The government is regularly citing a trajectory of a $12 billion space industry for Australia by 2030. What is the source for the claim about that trajectory? What does that involve?

**Dr Clark:** In the review into Australia's space industry capability, one of the recommendations to the government, which was accepted, was that one of the critical goals of the agency should be to triple the size of the Australian space industry, which is currently valued at $3.9 billion, by 2030 and create an additional 20,000 jobs. There is an estimate of some 10,000 jobs already. That's our goal. It is an ambitious goal, and we will start to measure this year the baseline for that, with a very detailed baseline of the make-up of that sector, and also look at areas where space impacts the broader economy. We will drill down and look at the jobs and the spin-off jobs. So we will set a baseline for that and then we will track that every few years so that we can track progress against that ambitious goal.

**Senator WALSH:** It is an ambitious goal to reach that size of industry by 2030. Was there some modelling done? Did somebody do some modelling? Is there a methodology that you can share with us about that projection?

**Dr Clark:** Yes, there is. In terms of looking at the overall growth of the global industry and Australia's capacity for that, they're looking at what was achievable in a year-on-year compound annual growth rate. That was the methodology that was used. I can say we are already seeing some very positive hallmarks. It is too early to have the full picture of the sector, which is the work we're undertaking, but we're already seeing over 136 per cent growth in the small to medium-sized enterprises. In the last few years we're seeing a 55 per cent growth in international companies here in Australia—and that's not just the number but also the investment. We also track, as part of that measure, the capital investment into the sector, and our role is to look at the civil space capital investment. We're seeing over $1.4 billion now projected to be invested in that sector over the next few years. All of those indications are, I think, very good pointers at this point that we're seeing quite a bit of
momentum not just in the country but in other countries looking to engage with us. In terms of exactly how we're tracking to that, that will take some further work in establishing the baseline and tracking against the baseline. Has that answered your question, Senator?

Senator WALSH: Yes. Would you describe that trajectory to $12 billion by 2030 as indicative and aspirational or as robust, based on modelling and one that you have confidence in?

Dr Clark: I think robust. We've seen over 6.5 per cent growth in the UK space industry. We've also seen forward projections for the global industry sitting at over $360 billion and projected to grow very substantially. So we're looking at the global sector. We're looking at other countries. The issue here is that we are projecting greater than global GDP growth and greater than Australian GDP growth for the sector, and that is not unreasonable where we set it. It's certainly not unreasonable with what we're already seeing.

Senator WALSH: Thank you. Just going back to the $150 million NASA moon to Mars program: your answer to the question about how the funding's going to be allocated to support the growth of that industry supply chain and create jobs in Australia was that you haven't got there yet, and I understand that. Is the funding available now? Does it exist? How is it being administered, or how will it be administered in the short term?

Dr Clark: I'll just ask Ms Dailey to outline the sequencing of that funding and when that will come into play.

Ms Dailey: The funding for the partnership with NASA doesn't commence until 2020-21, and it actually starts on a gradual increase. In 2020-21, there's $5 million allocated. For the next years it will be $10 million, $35 million, $45 million and $55 million to get to a total of $150 million. We have nine months to organise that program design, and at this stage there's the flexibility to use a variety of measures to deliver those funds.

Senator WALSH: I'm advised that there is some modelling about the current employment level in the Australian space sector and that that is about 10,000 people, and you've got a target trajectory for 20,000 people. I am advised that included in that number is a range of entities like Foxtel, NBN and some law firms, for example, and perhaps also PricewaterhouseCoopers. Are those entities appropriately counted as employers in the space industry?

Dr Clark: It's a good question. The analysis for the 10,000 was completed on the basis of the known industry, in terms of the names that you mentioned—also tracked industry by industry. For example, while Foxtel does have some of their communication in direct-to-home satellite TV, only that portion that was related to satellite communication is included in the revenue, and not in the jobs number. All of the entries are auditable, so the source for all the numbers is auditable, and we will do that as well on the baseline. I have seen some commentary related to some of those elements and have addressed those individually with someone who has raised those issues. I think they were much more satisfied, when they saw the auditable trail, to see that incorrect numbers had not been included. It's important when we do this work that it is auditable so that you can ask those questions and get valid answers. That's the way we will approach it as well.
Senator WALSH: Just to clarify my understanding of that, are you saying that the figure of 10,000 people today, to the extent to which, say, submarine builder ASC's employees are included in that—

Dr Clark: No, there would be no inclusion of industry sector roles outside the space sector.

Senator WALSH: This has been raised with you somewhere before?

Dr Clark: Just some questions on some of the individual allocations, and going through then the auditable view of that, it was quite clear that incorrect or inappropriate numbers had not been included.

Senator WALSH: To the extent that those company names may be somehow associated with this data in relation to the 10,000 employees, are you satisfied that we are correctly counting people as space employees?

Dr Clark: Yes, it's a very reasonable estimate. Where the query came from is listed in the review into Australia's space capability. There was a list of companies that had been examined—so, transparency of all those companies—but against several of them there were no jobs allocated, as would be appropriate. You could have seen the list and made the assumption they had been, but in fact on forensic examination that was not the case. But we certainly stand open to make sure that the baseline will be auditable and people can ask those questions and delve in behind the numbers so they are understandable and clearly auditable.

Senator WALSH: In terms of the consultants who provided that employment estimate to you, are you able to provide to us, on notice, the methodology that they used to determine space industry jobs? What is counted in and what is not counted in?

Dr Clark: It was not provided by consultants. The job's estimate was done by the department itself, on the basis of the information we had. I would have to talk to the department first to ask whether we can provide that on notice, because this is before the agency was established. Let me ask that question—

Senator Canavan: I am happy to take that on notice.

Senator WALSH: To clarify, what we are after is a list of jobs that were included as space industry jobs and a count of employees associated with that.

Senator Canavan: No problem.

CHAIR: In designing the plan from here—and it is a very ambitious goal, and a very great goal, and we should be ambitious in this space—have we looked at overseas experience? The one that is in the media fairly frequently is the Canadian experience of focusing on one particular thing—the robotic arm—and gaining an extraordinary economic benefit from that. Have we looked at overseas experience like that in forming how we are developing the program from here?

Dr Clark: Yes, we have. In fact, in the international realm we have already signed existing agreements with the French space agency, CNES, the Canadian agency, the UK space agency and the UAE, so we are already collaborating. Just yesterday the minister announced new agreements with the German space centre, DLR, the Italian space agency and the New Zealand space agency, as well as a statement of strategic intent with Maxar.
Technologies, a US company involved in the space sector. So we certainly have been looking at those models.

Other countries are now approaching us. They're certainly seeing our singular focus on transforming and growing our space industry. We are one of the most commercially focused agencies in the world, and the way we have engaged directly with industry has been very much noted. We have something called a statement of strategic intent and cooperation, which we have now signed with 12 companies, and this has been noted by other countries. Canada approached us just this week, noting that we had formed something called the 'space bridge' with the United Kingdom. This will be a bridge led by Austrade and the trade department in the UK to support companies move across that.

In answer to your question, I'm pleased to be able to say that we've looked at all the models, but we're also setting a path that is relevant and unique to Australia and meets our needs as well. I'm pleased to say that other countries are showing some interest in it.

CHAIR: Obviously we don't want to ring-fence where we end up performing in this space—I'm not using a pun there!—

Dr Clark: We're used to those; don't worry!

CHAIR: but we have some very high capacity in remote operations linked to the mining industry, in my home state particularly. I'm sure there is in your home state too, Minister. What are our strengths that we'll be playing to as you develop this program?

Dr Clark: Thank you for the question. Absolutely Australia has unique strengths, and therefore we need to set our strategy in the areas where we can compete and win. I draw your attention to the 10-year strategy, Advancing Space, which has been approved by the government, in which we highlight very clearly the areas of strength. As Senator Canavan outlined, firstly there is position, navigation and timing and Earth observation, which are being led and carried out by Geoscience Australia. They are two early priorities for us. The third one is advanced communication, the SmartSat CRC, which was mentioned by Mr Lawson. This is a very important collaboration. There is over $245 million in that full collaboration. This is the country that invented wi-fi, so we should be in advanced communication. Then, moving forward into the full 10 years of the strategy, is space situational awareness. We have a unique position to look into the galaxy and our solar system. We are in the southern hemisphere, a very important location for permanent custody tracking of space debris. Leapfrog R&D is all those areas such as quantum communication, propulsion technologies and 3D printing where Australia has some areas of potentially globally leading technology, and we want to pursue those. Robotics and automation—we lead the world in remote asset management. If you can run the Pilbara from Perth, you can certainly start to run remote operations on the moon and other places. Our last strategic area is access to space, which encompasses all of the aspects of getting safely into space and safely back.

CHAIR: I could talk about this all day, but that would be self-indulgent. Senator Hanson-Young, you have the call.

Senator HANSON-YOUNG: I've got some questions for Questacon.

Ms Kelly: Are there further questions on space? If it were possible at all to release Dr Clark, that would be appreciated.
CHAIR: We'll confirm that. We'll move to Questacon, and we will return to you as soon as we are advised.

Department of Industry, Innovation and Science

[14:00]

Senator HANSON-YOUNG: Professor Durant, can I confirm that Questacon is part of the department—it's not an independent agency in any way?

Prof. Durant: Questacon exists as a specialised division within the Department of Industry, Innovation and Science.

Senator HANSON-YOUNG: Is Questacon unusual amongst the national institutions in that way?

Prof. Durant: Yes. We do not have our own legislative mandate. The other national institutions have their own statutory arrangements.

Senator HANSON-YOUNG: Yes, so it is unusual. What is the total funding this year for Questacon?

Prof. Durant: This year the total funding is $27 million, of which we receive just over $11 million from the government. We earn the rest. This year some supplementation came through in a budget measure before the election to support our outreach programs. There's a $15.1 million measure which will allow us to reach out into more communities across Australia.

Senator HANSON-YOUNG: Is that an extra $15.1 million on top of the $27 million?

Prof. Durant: The $15.1 million is over three years. Last year, for example, we received an appropriation of $11.627 million. This year it has gone up to $15.822 million with the additional budget measure.

Senator HANSON-YOUNG: Where does the rest of the money come from?

Prof. Durant: We earn the rest of the money through a range of activities. Centre admissions is one of them. Since the opening in 1988, Questacon has always had an admission charge. That, again, puts us in a slightly different position to the other national institutions. There is also sale of goods from our shop, program income, memberships, exhibition hire and sponsorships. We have mobile phone masts on our roof, so we get some revenue from that.

Senator HANSON-YOUNG: How much in total would exhibition hire bring in?

Prof. Durant: In 2018-19, it was $344,000. This year we're projecting a lower figure of $149,000. That market varies, depending on what products we have and what the other institutions around Australia—and, indeed, occasionally internationally—require in terms of temporary exhibitions.

CHAIR: Senator Hanson Young, can I interrupt briefly. The Space Agency are required, so they will need to remain in the building.

Senator HANSON-YOUNG: So you think that's going to halve this year?

Prof. Durant: It's dropped this year. We're currently reviewing how much we will get in the future. It's a balance. There is the service we provide to regional Australia, where there is a very poor market for exhibition hire and so we have to provide exhibits to small
communities, sometimes for a zero fee. At other times, we can attract a higher fee for larger exhibitions in a more active market in the metropolitan areas or occasionally overseas.

**Senator HANSON-YOUNG:** How much money do you bring in from sponsorship?

**Prof. Durant:** In 2018-19, the figure was $2.58 million. In 2019-20 the equivalent figure is $1.434 million.

**Senator HANSON-YOUNG:** Does the minister have any ability to direct the content of the museum? What's the interaction with the minister's office?

**Prof. Durant:** No, the minister does not have any direct influence on our content. Obviously, if the minister were to say, 'We'd like to do something more on women in STEM; can we see something in those areas?' of course we would respond to that. In terms of the, let's call it, editorial control of our content, there is no ministerial influence.

**Senator HANSON-YOUNG:** Do you have an exhibition on women in STEM?

**Prof. Durant:** Fortunately, 54 per cent of our workforce are wonderful women in STEM employees: science communicators right across the organisation to our workshops and design studio. So we have a lot of role models and a lot of gallery assistants that the public can interact with. We do a range of events with, for example, the Superstars of STEM and visiting scholars and academics. So we have a good program, as such. We can always do more, and I think all science agencies are stepping up at the moment to make sure that we all work to a better equality of opportunity.

**Senator HANSON-YOUNG:** Obviously, Questacon is a much-loved institution. With the risk of being self-indulgent, Chair, I must declare that my daughter has spent a lot of time at Questacon over the last 11 years that we've both been in and out of this place while I've been a senator. It's a wonderful resource for children and young people. To that point, I'm particularly interested about the types of exhibitions and programs you have engaging kids on the issue of climate change. This is obviously something that's becoming more and more important to young Australians. All of the various surveys that have been done in recent times are saying that the issue of climate change is becoming a higher and higher issue of importance to young Australians. The Paris Agreement requires a global transition away from fossil fuels towards renewable energy resources, leaving most of the coal, gas and oil in the ground if we have to transition properly. As the National Centre for Science and Technology, does Questacon have a dedicated exhibition about climate change?

**Prof. Durant:** No, we don't, but we have a range of programs and activities that we've done over the years. I'll perhaps turn to my colleague, Dr Bobby Cerini, who is the director of science and learning. Bobby, perhaps you could explain a bit more about what we do in that regard.

**Dr Cerini:** Yes, I'm very happy to. Thanks for the question. Our current content contains a range of experiences relating to the science of sustainability, including climate change. We address that through the framework of the 17 United Nations Sustainable Development Goals.

We're very conscious of the interest and concerns that are apparent within society, and our job is to translate the complex science and technical information that underpins what are very much umbrella terms for a whole range of different aspects of science and technology. At the moment, if you were to come into Questacon—and I invite the committee to do so to experience the content—you'll see content relating to a range of different areas that relate to
climate change. They include an art installation that highlights the importance of the 17 Sustainable Development Goals; graphic panels throughout the centre that identify specific aspects of the science relating to individual goals; and large format graphics at the entrance to our Awesome Earth gallery. They relate to the dynamic forces within the planet, and they share information about the atmospheric carbon dioxide levels and perspectives of the earth from space in relation to planetary science.

There are exhibits about water, including in our early childhood area, Mini Q; a living coral reef tank that highlights the vulnerability of the oceans to coral bleaching; a solar energy exhibit—a partnership that develops and delivers internationally and across Australia the young person's plan for the planet, which is about empowering young people to develop action plans within their local areas and to develop plans across cultures to share the importance of immediate action in a way that they can be empowered to lead themselves; and The science of climate change book, which is developed and published by the Australian Academy of Science. That's available for free from the Questacon information desk. To date, we've distributed around 6,000 copies of that, which is around 2,000 copies per years. Renewable energy sources are highlighted in the new Questacon science show, which is tentatively called Power without Puff, and there a number of products within the Questacon shop, including solar lanterns and books for young people. We have a number of activities also in planning, if you are interested in hearing about some of those.

**Senator HANSON-YOUNG:** Yes, please.

**Dr Cerini:** We're currently exploring many different options that relate to the impacts of climate change and how they relate to high-quality visitor experiences and opportunities for learning. Because there are so many different mediums for learning and different styles in terms of how people prefer to learn, we look to the whole range of those, which include exhibitions and exhibits, presentations, public lectures, events and shows.

Our current commitments over the next few years include a four-year energy literacy program that will include science shows and exhibits; an international youth energy dialogue; a living exhibit on bees which will highlights the importance and vulnerability of insect pollinators; a major travelling exhibition on space science, including a significant component of Earth observations from space—which are vital to environmental monitoring and modelling into the future; and updates to a number of existing exhibits. The complexity of those varies. Immediately, in the short term you'll see expanded text relating to climate change in four exhibits in our Awesome Earth gallery; improved concepts and substantial information updates in a number of different parts of Questacon, including an upgrade to our solar exhibit and to our exhibits on the changing Earth systems and the videos around those; and also a significant upgrade to an exhibit called Painting with Data that will integrate new datasets from science and research agencies across Australia.

We also have a commitment to collaborating with informal learning organisations throughout Australia, which includes other science centres, museums, zoos, galleries and gardens. We will be looking at how we are collectively addressing climate change and the Sustainable Development Goals and where, as a sector, we can do more and highlight activity and action within communities. Our support for National Science Week will continue, and will include a major event next year highlighting the science of the oceans. A review of the
Questacon strategic plan will occur before June next year. In that review, we will be looking specifically at how we will commit to addressing sustainability and climate action.

**Senator HANSON-YOUNG:** I'll be interested to hear when that is complete and maybe we'll be back here next year and you can give me an update on that.

**Prof. Durant:** Senator, if I may just add to that answer. Questacon is also part of a global community of science centres. Collectively, we work with science centres around the world that are facing up to similar challenges. We have cooperated with them in a number of ways, such as an albedo experiment, which was done on the lawns outside Questacon, looking at reflectivity and linking that to retreating icecaps—the change of heat absorption from ice and no ice—and other projects like that. I think the biggest contribution we can make is not only in Australia but also with that world community and people stepping up together. People might take one view that Questacon as that funny little white building by the lake, but we are actually part of a much bigger community doing a lot of really interesting work.

**Senator HANSON-YOUNG:** It sounds like you've got some interesting exhibitions and programs planned. Do you have anything that goes specifically to the issue of the carbon budget that we're facing in relation to our commitments in the Paris Agreement? Is there anything that teaches visitors and young people about the impacts of fossil fuels?

**Prof. Durant:** The energy show will certainly do that. Power without Puff, which Bobby mentioned, will certainly have an aspect of looking at the relationships between energy and power, and the consequences of different systems. One has to look at the global efforts towards transition to a lower carbon economy, which creates wonderful opportunities. We are doing work with hydrogen, for example, and we explode a lot of hydrogen balloons. That has huge potential for a fuel for the future. There's a lot of work being done in Australia on the potential for new industries to emerge.

**Senator HANSON-YOUNG:** But there is nothing at the moment that talks about the impact that fossil fuels are having? Could you go to Questacon and see that the biggest driver of climate change is the burning of fossil fuels? Would you get that experience?

**Prof. Durant:** No, I don't believe you'd see that just now.

**Senator HANSON-YOUNG:** In the sponsorship that you receive, my understanding is that you've had a long history of accepting sponsorship money from energy companies—the Japanese Coal Association, the Japanese Gas Association, the Petroleum Association of Japan and the Japanese Federation of Electric Power Companies. But I did notice, when I've been to Questacon, that the Shell logo appears a few times.

**Prof. Durant:** Yes, that's correct.

**Senator HANSON-YOUNG:** What does Shell fund? What does their sponsorship fund?

**Prof. Durant:** You mentioned some Japanese companies first. It's important to understand that when Questacon was founded, it was founded as a joint bicentennial project between the Australian government and the Japanese government. The Japanese government secured funding within Japan from a range of peak bodies. We had no control, other than the Prime Minister of the day receiving the cheque from the Japanese government—

**Senator HANSON-YOUNG:** Yes, that's an historical layover. I understand that.
**Prof. Durant:** Yes, it was a bicentenary project. That explains the Japanese links at that point. Then the desire for Questacon to meet a national mandate required us to get away from Canberra and out into the regions. The very first relationship with Shell was a tank of fuel. In 1985 that relationship was consolidated, and from that time Shell, in partnership with the Australian National University and Questacon, have been running the Shell Questacon Science Circus. That is a program that trains 15 or 16 postgraduate students each year in science communication. They deliver puppet science centres and school exhibitions across Australia. For example, they're in Gunnedah today. There was a public exhibition—a puppet exhibition—in Gunnedah last night and there will be one in Tamworth at the weekend as part of a three-week tour into northern and western New South Wales.

The funding from Shell has enabled that program to run for 34 years. It enables us to reach out to geographically isolated and socially disadvantaged communities.

**Senator HANSON-YOUNG:** How much would that be worth?

**Prof. Durant:** It's about—I can probably give you the exact figure—$1 million per annum.

**Senator HANSON-YOUNG:** Is that a contract you sign with Shell on a regular basis?

**Prof. Durant:** It's on an intermittent basis. The current contract is for just one year and then it will be reviewed.

**Senator Canavan:** I'll just add here—I know where this question is going—that the government fully supports partnerships of this nature. We just finished a session on showing that our resource industries make some of the greatest advances in science and technology. That's one of the reasons we've got a real opportunity, with the space industry for example. Obviously, a lot of young students who study science or technology disciplines in university end up working for our world-class resource industries. I think that it's great that they partner with our science organisation in this way to facilitate that understanding by young Australians. And, as the resources minister, I'm always telling resource companies that they should do more to give back to the community. I didn't know too much about that program before today, but good on Shell!

**Senator HANSON-YOUNG:** Would you be able to tell me how much Shell's sponsorship has been worth over the last five years?

**Prof. Durant:** Yes, if I take that on notice—

**Senator HANSON-YOUNG:** Of course.

**Prof. Durant:** we might be able to get back to you before the end of the day. I just don't have those figures in front of me.

**Senator HANSON-YOUNG:** Absolutely. And what is the reciprocal relationship that Shell gets from these contracts?

**Prof. Durant:** Through their corporate social responsibility funding they get the opportunity to help young people in regional and remote Australia, with a view to encouraging some of them to go on to study science, technology, engineering and maths. As industries, they need young people to come forward and take up and develop the foundational skills and knowledge that potentially enable them to join the industry.

**Senator HANSON-YOUNG:** Has Questacon ever considered tendering out this program?
Prof. Durant: No.

Senator HANSON-YOUNG: It's just something that only Shell has ever funded?

Prof. Durant: No, other funders have joined in. Coutts provided transport for some time, while FRRR were also involved in giving small amounts of support.

Senator HANSON-YOUNG: This is my final question. I have a couple of others I can put on notice. If you can get that five-year figure, that would be helpful. I'm a little bit concerned about the perception that there is nothing in Questacon that shows the impact of fossil fuels on climate change. And yet a big part of the program money—$1 million or so a year—comes in from companies like Shell. It feels to me that that allows Questacon to be open to criticism.

Senator Canavan: I think that's a pretty unfortunate claim given, as you said before, the high regard Questacon is held in within our community—and mine too; my family are regular visitors. There is no evidence for that at all. We've just had a long dissertation on that program. I think the program that Shell funds sounds incredibly important, particularly to rural and regional areas. It's a great institution in Canberra, but not everyone in the country can get to Canberra. The second point I'd make here is that another line of questioning you had earlier was around ministerial direction and involvement. As has been outlined, that doesn't happen. Likewise, I don't think individual members of parliament should be directing Questacon in a certain way. They do a great job, they're professionals and they should be left to get on with their job.

Senator HANSON-YOUNG: I'm worried about the perception. I think Questacon is a very important institution and I think climate change is an issue young people want to learn about. They also have to learn about the impact of fossil fuels.

CHAIR: We will go to Senator McAllister, who has got some broad corporate questions. Is that right?

Senator McALLISTER: I've got broad questions around the audit that's being undertaken in relation to cladding.

CHAIR: So are the correct people are in the room? We will then go back briefly to the Space Agency with the deputy chair, and then we will be able to release them. So Senator McAllister has the call for now.

Senator McALLISTER: I understand that Minister Andrews is the lead minister in regard to the issue of flammable aluminium polyethylene core cladding. Is that correct?

Senator Canavan: Yes, that's right.

Senator McALLISTER: And a commitment was made to audit flammable cladding on all properties—and this was made by states and territories and the federal government—back in 2017. How is this audit going? Has it been undertaken and is it complete?

Mr Power: You are very correct that the Building Ministers' Forum undertook to take audits across all states and territories from 2017. Each of those jurisdictions are undertaking those audits. Many of them are ongoing. The Commonwealth itself, while it's not the regulator in the way that the states are, has also been auditing the buildings that it particularly owns as part of that work as well.
CHAIR: I will interact briefly because I do want to let people go if they are not required. We have had some further discussions, and Labor senators have reviewed what was discussed earlier. We can release the Space Agency, so they go with our thanks. Senator McAllister, you have the call.

Senator McALLISTER: So the Commonwealth is auditing the buildings that it owns. Is that audit complete?

Mr Power: It's not totally complete. It is very well progressed. There are a large number of buildings that we own across the Commonwealth. Indeed, in total there are over 30,000. Defence themselves own a lot of buildings. As has been reported, that's narrowed very significantly after a huge amount of work. As a result of that work, there are now 11 buildings that require rectification. Those 11 buildings currently have processes underway to undertake that rectification.

Senator McALLISTER: When you say that it is largely complete, what aspects of the audit remain to be completed? What has been done and what is yet to be done?

Mr Power: If you think about the whole of, for example, an estate owned by the Commonwealth, you see there are all sorts of buildings in that, all the way from single-storey buildings, for example, that the Department of Defence might own in defence housing all the way through to all sorts of buildings that we operate in all of the Commonwealth's functions. So there has been a process gone through by each portfolio, and I must stress that this portfolio isn't responsible for undertaking those audits. While Minister Andrews is a lead minister, for example, representing the Commonwealth on the building ministers forum, this portfolio is coordinating the responses of those audits rather than doing those audits—if you understand that distinction.

Senator McALLISTER: Well, I understand that you're not doing the audits. So what you're saying is that the actual business of undertaking an audit is being done at a portfolio level.

Mr Power: Correct.

Senator McALLISTER: Are they then reporting results to you?

Mr Power: Yes, we are undertaking a reporting function to bring together that information that is being undertaken by the different portfolios.

Senator McALLISTER: So Minister Andrews is the lead minister and you are the lead portfolio agency.

Mr Power: Just to be very clear: we're coordinating the responses for those audits.

Senator McALLISTER: Mr Power, I think at some point someone in the Commonwealth is responsible for ensuring the audit process is completed, and unfortunately I suspect that is you, so I don't think we can get away from that. It is this department's responsibility to do this work on behalf of the Commonwealth, is it not?

Mr Power: Each portfolio has accountable authorities, and those authorities are responsible for the safety of the people in their portfolios. So it is the case that each of those portfolios is responsible for that and therefore audits that are going on in that portfolio, but definitely we are taking a role in coordinating all of that, as I said. Absolutely we have stepped in to coordinate that, because it needed to be done across the Commonwealth.
Senator McALLISTER: Okay. So my earlier question to you was to ask: what aspects of the audit have been finalised and what aspects remain to be done? Are there, for example, some portfolios that are complete and some that are incomplete? Is that the reason that you say that it's partially complete, or is it some other delineation that I don't understand?

Mr Power: The answer is that, as I said, 11 buildings have been reported to us that require rectification. There is some remaining technical work in some particular portfolios to finalise a small number of buildings, and that is still ongoing.

Senator McALLISTER: Sorry, Mr Power. I'm specifically asking about the audit process. I understand that rectification is another process again. Can we stick to the audit? You've provided a template to all the agencies?

Mr Power: We've provided a process that goes through technical information about, for example, how to go about those audits. That communication has been with every portfolio and agency across the Commonwealth.

Senator McALLISTER: When did you provide that?

Mr Power: We started communication with portfolios in 2017. As people have reported, of course, we have looked at that information and clarified and provided more direction and information wherever we possibly can to help, as we in the portfolio do have expertise. For example, the Australian Building Codes Board is in the portfolio, and we've used that expertise to inform back to portfolios to help them undertake the audits.

Senator McALLISTER: Which departments have completed the audit?

Mr Power: I don't have the names of all the portfolios here with me. I can tell you that communications across all portfolios have taken place, and the completion of that is largely done. I'm very happy to take—

Senator McALLISTER: Sorry, Mr Power. It would help if you spoke very plainly. The completion of what has already taken place? The communication?

Mr Power: We have communicated with every portfolio.

Senator McALLISTER: So you have sent a letter to everybody. Has everybody written back to you? In the simplest terms.

Mr Power: I will need to take it on notice if there are any portfolios or agencies that haven't responded to us in full in relation to those audits.

Senator McALLISTER: So you don't know whether or not this audit has been completed.

Mr Power: There has been a very large amount of communication, but if there are any portfolios or agencies that haven't responded, I will need to take that detail on notice.

Senator McALLISTER: We are talking about a set of issues which the public are concerned about because the public are concerned about public safety. They are concerned about people working in Commonwealth buildings, visiting Commonwealth buildings, living in Commonwealth buildings. It's a safety issue. From that perspective, whether or not departments have been writing to one another isn't the key issue. I am trying to understand the state of knowledge about flammable cladding and its use in Commonwealth buildings. Of the departments, how many departments are yet to complete a comprehensive audit of their own buildings?
Senator Canavan: I think we might take that question on notice, Senator. Obviously we absolutely want to get you that information, but, as the official said earlier, he doesn't have a list of those at hand. We'll take that on notice and come back.

Mr Lawson: Senator, perhaps I can help. There are 190 different agencies within the Commonwealth with which we are working on this process.

Senator McALLISTER: And you have been working on it for two years.

Mr Lawson: Yes. The issue is that the community has been let down by the building industry—some elements of it—and by the regulatory process of some industries, so it is not a simple matter to know whether the buildings are appropriate or not. We can't use the available data; we have to go through it. Agencies are doing an audit of their buildings to determine whether that cladding is compliant. We need to double-check the approval processes that have been done by state registered certifiers. That process is difficult, complex and ongoing. In terms of the Commonwealth's own buildings, it is substantially complete, but not quite. Through that process we have identified 11 buildings which we know need rectification. The agencies are very conscious that they are legally responsible, under occupational health and safety rules, for the safety of their people and the buildings they are responsible for. Our audit process is making sure that there is a whole-of-government understanding that that process has been completed by all of those agencies. So it's a big ongoing issue, and we are working on it and seeking to complete it.

Senator GALLACHER: How long does it take to walk around a building and work out whether you have cladding on it? There's 190 of them. Five days?

Mr Lawson: Senator, whether cladding exists or not is not the issue. Cladding can exist on some buildings and be compliant with the code and be perfectly safe. Some cladding can exist on other buildings—

Senator GALLACHER: I understand all the vagaries of it, but 190 buildings—how long does it take?

Senator Canavan: No, it's over 30,000 buildings.

Mr Lawson: Over 30,000 buildings and 190 agencies. So it's not just departments; it's all the agencies within those departments which have independent responsibilities for their buildings. We have a devolved system of governance of those processes, so we are engaged in over two years of substantial work in finding out what the situation is and making sure that the people in those buildings are safe.

Senator GALLACHER: It's very frustrating.

Senator McALLISTER: It is frustrating. Your earlier evidence was that there are 11 buildings which are noncompliant and require rectification.

Mr Lawson: Yes, Senator.

Senator McALLISTER: If the audit is not complete, how can you be certain that there are only 11 buildings that are noncompliant?

Mr Lawson: We've said we have identified 11 buildings of the Commonwealth owned buildings and the process is almost complete—not complete yet. Whether there are some more is to be determined by that complex process.
Senator McALLISTER: Has industry completed its own audit of its own property portfolio?

Mr Power: Yes. We have completed an audit of the buildings we own.

Senator McALLISTER: Have you completed that audit for all buildings or a subset of the buildings that you own?

Mr Power: All the buildings we own.

Senator McALLISTER: So irrespective of building height, purpose—

Mr Power: This department owns five buildings.

Senator McALLISTER: That's not as complex.

Mr Power: None of those buildings require rectification. Four of them don't have aluminium cladding. The fifth one is unoccupied and scheduled for demolition.

Senator McALLISTER: Of the 11 buildings that channel nine and Defence estimates were talking about yesterday, there are 11 buildings containing flammable cladding and five Defence buildings. Are they additive or does the 11 buildings include the five Defence buildings?

Mr Power: The 11 buildings includes Defence buildings.

Senator McALLISTER: Thus far you have only identified 11, including the buildings in Defence?

Mr Power: Correct.

Senator Canavan: Just to clarify too, it is not the department of industry that has done the identification.

Senator McALLISTER: I understand.

Senator Canavan: They've simply consolidated the information.

Senator McALLISTER: But they are leading the Commonwealth process, and at some point someone's got to be accountable, and unfortunately for all of you, I think that's you.

Senator Canavan: Yes. That's fine.

Senator Canavan: Defence has made public where those buildings are located. Where are the other six buildings located?

Mr Power: I think Defence has made public the bases on which those buildings are rather than the buildings. As I said, we are coordinating responses. Our view is that it is a matter for those portfolios to make that information available, depending on their judgement about those buildings. Particularly because, and this point has been made by many of the state ministers across Australia, the details of those buildings, specifically their locations et cetera, is not something to be made public, partly because of risks that could arise as a result of that in relation to arson, for example.

Senator McALLISTER: When did you receive the information from Defence about their audit results?

Mr Power: We have received lots of communication from all portfolios—and Defence a number of times in relation to their audit—over a long period, as those audits have progressed.
Senator McALLISTER: You will be aware that there is a series of emails in the public domain between yourselves and the Department of Defence, and they're very recent, and they indicate that the Department of Defence in fact, only very recently provided its audit results to your department. That's correct, isn't it?

Mr Power: I wouldn't say that. I am aware of those emails. There has been subsequent communication between those emails. I believe that email was dated 31 July. We have had subsequent communications with Defence and more up to date since then, and I believe that the officials from Defence actually clarified subsequent information in the hearings earlier this week in relation to that.

Senator McALLISTER: I think the emails were in fact in August, that's right isn't it? That the exchanges between yourselves and the Department of Defence took place around 20 August?

Mr Power: As I said, we have had multiple exchanges. I don't have those pieces of papers in front of me on all those dates, so I can't confirm that with you, but I can tell you that we have had subsequent communications with them.

Senator McALLISTER: I am certain you will have. There is an indication that around that time, when you were corresponding with the Department of Defence and trying to get them to finalise their audit, because it wasn't finished at that point in time, there is what appears to be a narrowing down of the audit, a sense that the audit for now will focus on Commonwealth owned buildings and only those buildings that are more than three stories and are not houses. Has the audit been narrowed in scope? Have you revise the terms of the audit since 2017?

Mr Power: I should explain—and this goes to Mr Lawson's point a little earlier—where, for example, aluminium composite panels are used, it is important to know on what buildings they're used and how they're used. The National Construction Code goes into this in a lot of detail. The audit has been undertaken in relation to the National Construction Code, so it is not a case that every building, regardless of their characteristics, is problematic and needs to be rectified through this audit—for example, single-storey buildings. So some of the communication that you are referring to, and that I referred to a bit earlier, clarifies the types of buildings that need to be focused on. What that means—

Senator McALLISTER: I understand the point you're making about the building code and the complexities of determining where cladding presents a risk and where it doesn't. I think that's the point you're making. My concern is this: it's 2019, this process started in 2017 and in August 2019 people are still sending emails back and forth to one another trying to work out what's in scope for the audit—what they actually have to look at and what information they need to provide to you as the lead agency. Are you not concerned that the level of uncertainty within the Commonwealth is part of the reason this process has not been finished two years after it was initiated?

Mr Power: As Mr Lawson mentioned, there are 190 agencies, and the task of making sure that we have the right buildings in scope and focused on and not, for example, have resources focused on buildings that are not of immediate concern even if they have aluminium composite cladding is important. It is complex.
Senator McALLISTER: Prioritisation is terrific, but prioritisation two years into an audit process seems a little bit late.

Mr Power: That is one email exchange. It is not, for example, the first time that information was provided or that we spoke to agencies about that information. Buildings that are of certain classes and are above two or three stories are the buildings that the audit needs to focus on, and that was some of the clarification and request for focus that you'll see in some of that correspondence.

Senator McALLISTER: Two years into the process.

Mr Power: As I said, that is one particular piece of correspondence; it's not the only piece of information or correspondence.

Senator McALLISTER: The other thing that appears in that correspondence is a report from personnel who attended an interdepartmental committee about this same matter, and the report back from the interdepartmental committee is that there is uncertainty not just in the Defence department but in the committee as a whole about what the term comprehensive, or 100 per cent, audit is actually going to mean. Did the minister seek a briefing from you about how this process is going after these media inquiries?

Mr Power: We do speak frequently with the minister about building matters including the audits.

Senator McALLISTER: Sorry?

Mr Power: We do speak frequently and brief the minister on the progress of the audits.

Senator McALLISTER: The emails explicitly note that there is an information request from the shadow minister for industry, Mr O'Connor, and they go on to say the audit will now focus on Commonwealth owned buildings and the revised criteria. Did the department water down the cladding audit in response to a request from Mr O'Connor about the progress of the audit?

Ms Kelly: Senator, I don't think the officer has the email in front of him, and sometimes it's hard to put answers in context when you don't have all the material in front of you.

Senator McALLISTER: That's a reasonable point, Ms Kelly. Perhaps I can just ask this: Mr O'Connor wrote to your minister and asked for an update. Was there any change to the terms of the audit after the receipt of that letter?

Mr Power: The audit would both include—

Senator Canavan: Can I just clarify, is it possible to have the correspondence tabled here? Is this something that was submitted to estimates earlier in the week? I think Ms Kelly's right. It's a little hard for the official—

Senator McALLISTER: It is difficult. What I will do is try and place my comments in the general—it is true that a lot of it is based on the reporting around the documentation.

Senator Canavan: We've seen the reports, yes. All right; we'll go from there.

CHAIR: We're happy to get copies of the articles for you, Minister.

Senator Canavan: The question was, 'Were there changes to the audit process following a letter from the shadow minister?'
Senator McALLISTER: Correct. The shadow minister writes to your minister on 15 August and is seeking an update on the audit process. At that time, is there any change to the scope of the audit process?

Mr Power: I would say there's been no change to the scope of the audit process, either there or at any time. There's always been a prioritisation on Commonwealth owned buildings, and that is definitely the case. Again, I don't have that correspondence in front of me, but I could imagine that is a reflection of—in completing the audit, it is a priority that Commonwealth owned buildings be prioritised.

Senator McALLISTER: I'm having difficulty understanding how the audit can be said to be complete if there's a priority on Commonwealth owned buildings. Either it's an audit of Commonwealth owned buildings or it's an audit of a broader suite of buildings but Commonwealth buildings are to be prioritised. Which is it?

Mr Power: The Commonwealth owned buildings are prioritised. The Commonwealth will also look at, and is now moving on to look at, the leased buildings. In leased buildings the Commonwealth is not a landlord, it is a tenant. As we started out, at the beginning of this discussion, the states are undertaking significant audits and may well cover buildings for which the Commonwealth leases.

Senator McALLISTER: To be clear, the audit is not complete. If the audit's ultimate purpose is to assess owned and leased buildings, the audit is only partially complete.

Senator Canavan: That's been stated earlier.

Senator McALLISTER: It's taken a very long time to get to this point, because the evidence from Mr Power and Mr Lawson was that the audit was substantially complete, and now we find out that it's not. It's only the Commonwealth owned buildings that have been dealt with, and the leased buildings are yet to be commenced.

Mr Power: What I said was that the audit of the Commonwealth owned building is substantially complete.

Mr Lawson: Parallel with that, we've been doing an audit of the leased buildings. That hasn't been subsequent; it's been in parallel. But our focus has always been on those Commonwealth owned buildings, for which we are the landlord—and we've got much further along the path on those buildings—but the leased buildings are an ongoing process.

Senator GALLACHER: It's a division of owned buildings. Defence would be the biggest owner of buildings.

Mr Power: Certainly the biggest owner of buildings.

Senator GALLACHER: By how many multiples?

Mr Power: A large multiple.

Senator GALLACHER: Right. So you've constrained it to, basically—a huge proportion of this audit is about defence facilities.

Mr Lawson: No.

Mr Power: By numbers of buildings they've owned—

Senator GALLACHER: Exactly.

Mr Power: I think the majority would be in the defence estate.
Senator GALLACHER: How many?

Mr Power: I think it would be important to note that a very large number of those buildings, to my knowledge, are single-storey residential buildings—

Senator GALLACHER: I've been around the defence estate. I understand it.

Mr Power: in Defence Housing Australia, which are not of the type that would be of concern for this audit.

Senator GALLACHER: I'm four days into this, so excuse my shortness. Defence own a lot of buildings, and I understand a lot of them are single storey. I've been to many defence bases. You've constrained an audit to Commonwealth owned properties, of which the majority are Defence. How many other properties do the Commonwealth agencies own? Is it in multiples of five, 10 or hundreds?

Senator Canavan: To make it absolutely clear, my understanding—correct me if I'm wrong—is not that the audit has been constrained to those buildings, it is that the priority has been given to those buildings.

Senator GALLACHER: Two years into the process.

Senator Canavan: As has been mentioned, there's a process running in parallel for buildings for which the Commonwealth is a tenant. But in terms of the question around how many defence buildings are owned and their proportion to the next biggest agency, I don't know. I don't know if Mr Power has information, but he may.

Mr Power: I'd also like to clarify, to follow Minister Canavan's point, that there's no constraining of the audit to Defence.

Senator GALLACHER: Can we find out how many Defence properties are owned by the Commonwealth and how many other agencies are owned by the Commonwealth? Do you know that?

Senator Canavan: We will take it on notice. Obviously, it's a question that could have been asked of Defence.

Senator GALLACHER: My frustration with listening to this line of questioning is: when are we going to get around to safeguarding the people in the properties rather than dividing up whether you own them or not?

Mr Power: Where we started, again, was that this process has now moved, in a mature state, to have 11 buildings, out of, as we've just discussed, a very, very large number of buildings. So I think we are at that point.

Mr Lawson: It might be helpful, Senator, if I told you that, when people identify that the building's a problem, they move on fixing it. They're not waiting for the completion of this audit. This audit, as we tried to indicate, is a process of the Commonwealth government trying to get an overall picture of what is going on in this sector. But each individual agency is responsible and very conscious that they are responsible for the health and safety of their people. They know that they have got to get on, find out if there's a problem and fix that problem, and they're doing so, and we're doing a related but separate process of trying to make sure that, when we've completed this project, we'll be able to explain to the community exactly what's happened. We're in process at the moment. But it's not correct to imply that we're doing auditing and paper shuffling and not being concerned about the safety of people.
The process is identifying the things that need to be fixed and getting on and fixing those things. That's what agencies are doing across—

Senator GALLACHER: So, if I'm in a leased building somewhere, am I secure? If I'm a public servant in a leased building in Adelaide, am I secure? Has the audit been done?

Senator Canavan: As has been said, we obviously couldn't answer a hypothetical question, but there has been a parallel audit of buildings for which the Commonwealth is a tenant. The reason—again, officials will correct me if I'm wrong; I'm not the responsible minister—I've been told priority was given to Commonwealth owned buildings is exactly for the reasons you're outlining: to protect the safety of our employees. Obviously we have a primary responsibility in those buildings that we own. There are other processes occurring at state levels to audit a broader set of buildings for which we are a tenant, which may be captured by those processes, so that's why we have prioritised our own buildings first. But there's not a dismissal of risks in buildings for which the Commonwealth is a tenant. It's just that they might be captured by other processes first, and we'll still get through the audit of those as well.

Senator GALLACHER: Sorry, Senator McDonald.

Senator McDONALD: No; these are all very sensible questions.

Senator PATRICK: It's been five years since Docklands.

Senator Canavan: Two.

Senator PATRICK: No, since Docklands it's been five years. There are glaciers in New Zealand moving quicker than you guys, seriously.

Senator Canavan: You weren't here earlier, Senator Patrick. It's been two years since the audit was established.

Senator PATRICK: But five years since the Docklands fire, where the problem was identified.

CHAIR: Senator Patrick, Senator McAllister has the call.

Senator McALLISTER: Before we move off, I really want to get a straight answer on the basis on which you say the audit is substantially complete. In relation to Commonwealth owned buildings, of the 190 government departments, how many have provided you with information that is complete?

Mr Power: I think I've taken that question on notice, Senator—

Senator GALLACHER: 'No idea' is the answer.

Mr Power: because I don't have that information in front of me.

CHAIR: The official has taken it on notice.

Senator GALLACHER: Because he's got no idea.

Senator McALLISTER: Okay. Of the 190 departments who are undertaking audits of leased property, how many of those departments have provided information to you which you consider complete?

Mr Power: That's also a question I would need to take on notice.
Senator McALLISTER: You commenced your testimony in relation to this matter by saying that the department's role was to coordinate this process— to communicate and collate information about the process, rather than to undertake the audits themselves. I would consider your key metric is to know how many of the departments involved in this process have completed the task and how many have not. How can it be that the department does not know?

Senator Canavan: That's not been established. What has been established is that the information that you are asking for, which is of a detailed nature, is not before the official, and we'll take it on notice and come back to the committee.

Senator GALLACHER: There are only 190 of them, and you've been at it for two years.

CHAIR: Are we moving on?

Senator McALLISTER: Can I ask, in taking that question on notice, that the department table the list of agencies that are involved in the audit and the status of their audit process?

Senator Canavan: We can take that on notice too. We'll add that to the question.

Senator McALLISTER: Senator Gallacher went to the question of safety for the residents, staff and visitors in these buildings. Have personnel that are working or living in the buildings been notified of the risks? I'm speaking now of the 11 buildings where we know there is a problem.

Mr Power: Each of the portfolios, as I said, who are undertaking the audits have responsibility both for those audits and also for taking decisions around the communication of that to staff. Certainly, we're aware of communications between portfolios and their staff. Obviously, that communication depends on the nature, for example, of the buildings themselves and the outcomes of those audits, but we're certainly aware of communication that has gone on between some of those portfolios.

Senator McALLISTER: So the audit process doesn't go to the next stage, which is rectification and risk management? That's happening in a decentralised way, and there's no centralised point of knowledge about that within government?

Mr Power: No. As Mr Lawson said, rectification is underway. That process is being undertaken by those portfolios. It is also part of the reporting, and ongoing reporting, to us in a centralised way.

Senator McALLISTER: Have ministers who are tasked with administering departments with affected buildings—that is, those ministers who are responsible for any of the 11 buildings identified thus far in the audit—been made aware of the issue?

Mr Power: I think that would be a question for each of those portfolios as to whether they had advised their ministers. I certainly expect that would be the case, but that would be a question for those portfolios.

Senator McALLISTER: Mr Power, what are the relevant portfolios, so that I may ask in other places?
Mr Lawson: We've been engaged with all of the portfolios, and the departmental Secretaries Board has been discussing the issue and advising, so all departments are working through their portfolios.

Senator McALLISTER: But there are 11 buildings. Five of them are in Defence and six of them are somewhere else. Which are the relevant portfolios, so I may direct questions to their ministers?

Mr Power: It would be for those portfolios to release that information, in part because they would make judgements around whether they think that would be appropriate, rather than—

Senator McALLISTER: Mr Power, that's not how the standing orders of the Senate work. I'm asking you a question. Which portfolios are the other buildings in?

Senator Canavan: We will take that on notice. In particular, Senator, I'm happy to provide as much information as we can, but there may be some circumstances where we may not want individual buildings to be identified by that information, given safety or risks. That would go to the standing orders as a matter of public immunity, so I will take that on notice and come back with what we can.

Senator McALLISTER: Your minister is leading, on a policy perspective, on the government response to this, overall. There's a class action underway that goes to the applicability of Australian Consumer Law provisions and whether or not the sale and use of flammable cladding on apartment buildings was consistent with Australian Consumer Law. Has the industry department sought advice about that action and its relevance to this policy issue?

Mr Power: As you say, that action is ongoing. The Consumer Law issues that relate to that are in the Treasury portfolio. This department hasn't sought, for example, legal advice on that matter. That would occur, if it occurred, in other portfolios.

Senator McALLISTER: So are there any means to coordinate on the broader policy issue? You're responsible for the audit. Is anyone taking responsibility for the suite of issues that engage Commonwealth responsibilities—Consumer Law, laws around importation, and laws around phoenixing and responsibility?

Is there any place or point of governance in the Commonwealth departments where those things are being brought together?

Senator Canavan: That is being done here in this department. In particular, many of the issues you've raised go to issues that are discussed at the Building Ministers Forum—particularly those which go to Consumer Law, where it is a matter for the coordination between states and territories to regulate those products in the building environment. They have been matters of discussion, I think, at the last few Building Ministers Forums. The Commonwealth and Minister Andrews have been represented there, but there is a work program through that forum that involves the states and territories as well.

Senator McALLISTER: Right. I'm troubled by the discrepancy between these two answers, in that that makes sense to me: Minister Andrews is responsible, she goes to the Building Ministers Forum and she ought to be well briefed. There is an active case before the courts which goes to the applicability of Australian Consumer Law to this policy issue, and
your advice, Mr Power, is that the department hasn't sought any briefings or information about that area of law and its relevance to this area of policy?

Mr Power: Certainly, we're well aware of the issue and engaged in it. My interpretation of your question, sorry Senator, was whether we sought any legal advice, and the answer to that is no.

Senator McALLISTER: Sorry, I meant from a legal policy perspective. Have you sought advice generally?

Mr Power: Certainly, we've spoken to Treasury about the matter and we've spoken to the ACCC about the matter. We're well aware of it and, as you said, the case is ongoing. We haven't sought legal advice because the Consumer Law issues sit in the Treasury portfolio.

Senator McALLISTER: I think that's all I have for now; we may want to come back to those issues later, if there are other questions.

Senator PATRICK: I have a supplementary question: are building membranes included in the scope of the audit? They can be flammable too.

Mr Power: Building membranes—and there are other aspects—can be part of the risk assessment, for example. Mr Lawson referred to this a bit earlier: in many cases it's not simple to determine exactly. It's not easy sometimes to look at a building and understand exactly what the product is and that's certainly the case when looking at membranes. So part of a risk assessment is to ask what sorts of fixings and those sorts of things have been applied to come to an overall assessment of the building. And we—

Senator PATRICK: So the bottom line is yes, it's included in the scope?

Mr Power: Yes, wherever it's needed to be—that's right.

Senator PATRICK: Thank you.

CHAIR: We're not releasing anybody, but we will move back to the Space Agency briefly and try to wrap that up.

Australian Space Agency

[15:03]

CHAIR: One of the lessons of estimates is that when you're released you run out of the building! I'm sure you want to keep talking about this, so good on you for still being around.

Senator PATRICK: Thank you, Chair, and thank you, Minister, for obliging in respect of the Space Agency—I am grateful. How is the development of the Space Infrastructure Fund program progressing?

Dr Clark: The Space Infrastructure Fund, which is the $19.5 million fund, has seven infrastructure projects. Their aim is to drive the growth of the sector. There is $2 million for the space manufacturing capability in New South Wales, which will be part of the Western Sydney Aerotropolis. That is a commitment to that, and the aim of that is to be able to have access to manufacturing facilities in the new aerotropolis. There is $6 million for the mission control centre in South Australia, and I'll ask Ms Dailey to provide some further detail on how that's progressing. There is $1.2 million for upgrading the tracking facilities in Tasmania. Tasmania is well positioned to do de-orbit tracking as spacecraft re-enter the atmosphere above Tasmania, and so we wanted to upgrade that for full commercial use. There is $4.5
million for robotics, automation and artificial intelligence command and control in Western Australia. This will leverage the capacity that we have for robotics on earth as well as in space. There is $1.5 million for space data analysis facilities in conjunction with the Pawsey supercomputer in Western Australia. We have $2.5 million which has been set aside for space payload qualification facilities. That has not been allocated. That will go through a competitive process. And we have $0.9 million for looking at the aspects of risk in relation to launch activities. If there are any areas you would like to drill down into, we are happy to answer any questions.

Senator PATRICK: How are you engaging with stakeholders in respect of the grants scheme?

Dr Clark: The funds are a mixture of grants and procurement. I will pass to Ms Daly to list the progress of the grants.

Ms Daly: There are five projects commencing this financial year, so those are the ones that are most progressed. The mission control centre is a competitive grants around. We recently undertook consultation on the development of those grant guidelines. The consultation session occurred in September. We are now putting the package together and hoping to release the grant opportunity for a competitive round later this year. With the Western Australian command and control centre for robotics, automation and AI, we have run consultation sessions to inform of those grant opportunities. We are hoping to release the grants and guidelines later this year. That is a competitive round as well. The second one in WA is directly engaging with the Western Australian government, and that is a one-grant opportunity as well. We've also had the Tasmanian tracking facility. That is a grant with the University of Tasmania. I understand that we have released the guidelines for that and they have made an application for funding under that.

Senator PATRICK: Are you actively making sure industry are aware of these opportunities and discussing them with industry?

Ms Daly: The ones that are underway—the mission control and the command and control centre—have both had consultation sessions because they are competitive grant opportunities and people need to apply for funding under those two. Those two have had a consultation process.

Senator PATRICK: I note in the budget that your departmental expenses rise by $237,000 in 1919-20. I presume that is the growth that would be expected. But later in the forward estimates it drops from $1.1 million down to $363,000. This is just the admin expenses. So there is growth and then it peaks and then drops. What is the story behind that?

Ms Daly: I'm not sure where you are getting those numbers from. Are you talking about the operational budget for the Australian Space Agency?

Senator PATRICK: Yes. This is clearly not salaries but just the admin budget.

Ms Daly: For the actual agency?

Senator PATRICK: For the agency.

Ms Daly: Sorry, but those numbers don't look familiar to me. I can tell you the operational budget for the Australian Space Agency in the forward years. This year it is $6.7
million. In 2020-21 it is $6.8 million, in 2021-22 it is $6.7 million and in 2022-23 it is $6.7 million. So it is fairly consistent.

**Senator PATRICK:** What progress has been made in terms of identifying any gaps or inefficiencies in the market—things you want to achieve but where there are shortfalls?

**Dr Clark:** The process that the agency went through in establishing the 10-year strategy, which is the Advancing Space strategy, went through and looked at a number of criteria—where the opportunity was, where the gaps were, where Australia had competitive advantage. All of that was brought together into that strategy. And then, over 10 years, we have allocated how we will approach each one of those priority areas. They become the national civil space priorities, and there are seven of them. So we incorporated all of that into our strategic process. And then that document outlines how we want to approach that in three phases through the 10 years.

**Senator PATRICK:** And have you identified any impediments in respect of filling those gaps where systems might be required or change might be required?

**Dr Clark:** The purpose of the Space Infrastructure Fund was to look at where there was a role for government to look at critical infrastructure. There was also the assessment that was outside the agency in terms of our critical area of position navigation and timing—a clear responsibility for government to set up the critical infrastructure for 10 centimetre accuracy in our land, sea and airspace and down to less than five centimetres in our cities. That is the responsibility of Geoscience Australia, who are leading that work. We also have critical infrastructure in terms of bringing together all of the satellite data that we have under the digital earth platform or data cube platform, which again is the responsibility of Geoscience. They have been funded in both those infrastructure initiatives. So very early on, both through Geoscience Australia and the agency, we are looking at what critical infrastructure is missing.

The other aspect of that is the R&D side of things, and that's involved in the strategy as well. We have already seen significant announcements in the communication area—a $245 million collaboration between industry and government in the SmartSat CRC and additional funding as well from CSIRO basically into future areas of platform science. So across all of those aspects we're starting to address—not fully addressing—where there are gaps but also where the role is for government and where the role is for industry and research.

**Senator PATRICK:** You were talking about the positional information—the 10 centimetres and five centimetres. Is that GPS accuracy, like an RTK GPS or some form of high-end—

**Dr Clark:** Exactly. Australia has access to all six of the GPS satellites but it does not have a world-class level of accuracy across our airspace, maritime and land. This is really the work that Geoscience Australia has been leading. It is now funded to bring that up to the world level of 10 centimetres.

**Senator PATRICK:** When you say 'six satellites', you're talking about the difference between the European system, the US GPS—

**Dr Clark:** No. The money is provided to deliver a correction. As we take the information from those different satellites you need a correction to be able to get to 10 centimetres. You can then use a mobile phone tower and the mobile phone network to provide additional correction to get precise positioning in the cities.
Senator PATRICK: So you're just measuring an error from a known position and then transmitting that?

Dr Clark: It's complicated to be able to put. I wouldn't want to summarise the whole airspace program—and that's a question for Geoscience Australia—but it is critical infrastructure for the nation.

Mr Lawson: Geoscience are coming back. At the risk of making an idiot of myself, that error changes through time, so you have to have continuous adjustment.

Senator PATRICK: I understand that. The bottom line is that you know where something is and you measure what the error is and transmit it. I think there was an 80 per cent target for Australian involvement in some of these grants; is that correct?

Dr Clark: There was one grant that had a provision for 80 per cent involvement, which I think is the international fund.

Senator PATRICK: The International Space Investment fund?

Dr Clark: Yes. The reason for that was that the purpose of that fund was to open the doors and establish our very early relationships with agencies, such as the European Space Agency, and we needed enough flexibility to be able to do that. We gave ourselves the flexibility in that design. We certainly don't see that as restricting us. If we go above the 80 per cent, that's not a problem.

Senator PATRICK: No. You're singing in my language. In fact, you're doing way better than the submarine project, which is down at 30 per cent—which is not good enough, Minister. So 80 per cent is good. What metric do you use? Is that by value? There have been instances in the past where a contract was given to an Australian entity that really was a front for an international entity, so when you did an ABN count it was considered to be 80 per cent. How are you approaching the metric?

Dr Clark: It's a good question, Senator. In terms of looking at the individual grants, we will look at the entities themselves. We will also look at the leverage—what is the leverage we have coming into those projects—and support. We will look at which projects attract state funding as well. So there will be a number of criteria. We will look at the criteria of Australian ownership. That will be one of the criteria that is part of the selection. I can provide you much more detail on the selection criteria at the appropriate time, if that will help.

Senator PATRICK: If you wouldn't mind, perhaps on notice. I'm particularly interested in that Australian criteria.

Mr Lawson: The policy intent went to dollars spent in Australia.

Senator PATRICK: But you understand the difficulty.

Mr Lawson: We understand.

Ms Dailey: That information is actually online now. We released the grant opportunity guidelines very recently. They were open for applications from 5 November and will close on 17 November.

Senator PATRICK: Do they specify what Australian—
Ms Dailey: The application form, as I understand it, will outline what we need to assess that criteria.

Senator PATRICK: So that is online?

Ms Dailey: Yes, it is online now—at least on 17 October.

Senator PATRICK: Finally, I'm a great supporter of the SUBS in Schools program. I presume you've heard of the Space in Schools program.

Dr Clark: I'm aware of a couple with that name. Which one are you referring to?

Senator PATRICK: This is one where older primary school students and high school students build, in the submarine world, a submarine. They put in a tank and have a challenge to drive it down and pick something up. It's a fantastic program doing things that I never dreamed of doing as a kid. What these kids do is really inspirational. My understanding is they want to move into the space space, particularly noting what you are doing. So, if you haven't heard of them, I'm going to be contacting your office.

Dr Clark: One of our strategic pillars is about inspiring Australia. It's absolutely important that we inspire the next generation. As you outlined, this is a critical mechanism. We looked at our strategy over 10 years. We were realistic that in our first year we were not going to achieve a lot in that STEM area. There are a lot of responsibilities. We have laid out a program over years 2 to 8 to start working in that STEM area and in internship schooling et cetera. We will do that through partnerships.

Senator PATRICK: What this does is lead young children, young adults, into STEM based activities. Defence is sponsoring the SUBS in Schools program. I just hope there's a bit of money in there somewhere. It doesn't cost very much, but I think, if you have a look at that program, you will be blown away. The parents are so proud. It's just amazing what they do.

Dr Clark: Thanks, Senator. We will take your advice and look at that program.

Senator PATRICK: Thank you very much.

Senator GALLACHER: I have a couple of very, very quick factual sort of questions. Is the Space Agency subject to ASL caps under CSIRO? Are you a department of CSIRO and therefore constrained by the ASL caps?

Dr Clark: We're an agency that sits within the Department of Industry, Innovation and Science, and we do have ASL caps.

Senator GALLACHER: How many positions are on hold due to the imposition of the ASL cap or are you at full complement?

Dr Clark: I'll let Ms Dailey answer where we are with our ASL and where we are with our hiring.

Ms Dailey: This financial year we have an ASL provision of 23. We are currently operating just over that, at 23.8, but we are still early in the financial year and we expect to meet our cap by the end of the year.

Senator GALLACHER: Has that constraint meant private co-investment has been turned away due to capacity constraints in the agency?

Dr Clark: We are working very hard, to be brutally honest. We look at the ASL as we look at the resourcing and as we also look at the programs which are being funded. That's
certainly something that we look at as we apply for additional funding. We look at what's appropriate. We were set up to be a very lean agency, and that is the way we are approaching it. We are making sure that the funding and what we are doing is going into the right part of Australia. I wouldn't say it's restricting us at the moment if you look at what the agency has managed to achieve in its very short time, but we will constantly look at that in relation to our resourcing and as we engage with government.

Senator GALLACHER: It's a very clear position: it's a very blunt instrument across the entire sector, in that, where agencies are able to co-invest and actually productively exceed that cap, they can't.

Dr Clark: We have also taken the opportunity to have seconded positions into the agency to be able to support some of the work: we have a RAAF liaison officer for one day; we have Austrade; we have a CSIRO partnership; we have a NASA liaison; we also have time with Questacon; we make use of the graduate program; and we also have a fellowship. We look at ways that we can make sure that we're building those relationships and providing opportunities as well. That provides us opportunity and, I think, good experience for those people as well.

Senator GALLACHER: But the brutal fact remains, with an ASL cap right across the Public Service, even productive sectors which are lean and could expand can't, because the cap's the cap. We don't get nods on Hansard. You have to say yes or no.

Mr Lawson: There isn't a nod. This is a recently—

Senator GALLACHER: Hang on a second. I was asking Dr Clark.

Senator Canavan: Senator, you can ask whatever you like, but the manner in which it's answered is not for senators to direct. If Mr Lawson has some information to add, I'm happy for him to add the information.

Senator GALLACHER: I just want clarity on the answer. There was a nod, and Hansard doesn't pick that up.

Mr Lawson: The nod was to me to say, 'Yes, go ahead and answer the question.'

Senator GALLACHER: No, the nod was from Dr Clark.

Mr Lawson: Yes, from Dr Clark to me, as I understood it. This agency was recently set up under a budget measure—

Senator GALLACHER: That's not the question I asked. If you don't want to answer it, don't bother. I'll go to the next question.

Mr Lawson: No. Dollars were provided and an ASL was provided in that budget measure to set that process up. There's no separate cap thing going on here. The government made a decision in a budget process to create an agency. It provided, on the public record, how many ASL it would have to do its job and how many dollars.

Senator Canavan: My recollection of your question, Senator Gallacher, is that somehow the ASL cap would prevent government from doing productive things like this, which we all agree is a great thing. This is actually an example of how it doesn't restrict that, because the government has provided additional funding to create the Space Agency. ASL has been provided so we're able to do that within the overall position of a cap, which is obviously there to help the broader budget position.
Senator GALLACHER: There is a view that the ASL cap in CSIRO and certain agencies is constraining their ability to go to the private sector and undertake jobs, because they haven't got the people in their agency to match.

Senator Canavan: There's no doubt that there are scarce resources across government. There are always more things that we'd like to do than we have resources for. The reason we have scarcer resources than at some other times is still the legacy of wasteful spending from previous governments that may have been of different colours, so we've had to make tough decisions and, of course, that means we have to make choices and trade-offs with what we can prioritise within government.

Senator GALLACHER: I think Minister Cormann indicated there might be a tweaking of the edges there somewhere.

Senator Canavan: Maybe, because we've had six years of great budget management and now we might have the potential to restore normality.

Senator GALLACHER: Can we go specifically to the South Australian situation—is it Lot Fourteen?

Dr Clark: Yes. In relation to South Australia, there's actually a lot going on.

Senator GALLACHER: I'm asking you very specific questions.

Dr Clark: Sure.

Senator GALLACHER: What is the annual budget allocation for the South Australian officers at the Australian Space Agency, including FTEs?

Ms Dailey: Are you asking about what our current staffing—

Senator GALLACHER: What is the annual budget allocation for the South Australian officers of the Australian Space Agency?

Ms Dailey: At this particular point in time we don't actually separate our budget by officers. We're obviously working to grow our new headquarters in Lot Fourteen, and those headquarters will be available to the Space Agency from 19 December.

Senator GALLACHER: So we don't have any allocation of resources there at the moment? I'm going to ask a detailed series of questions, so don't try and guess what they are.

Ms Dailey: No, absolutely. The Prime Minister, in announcing that we would have our new home in Lot Fourteen, indicated we would have 20 positions for when we do enter our new home. We're well on track to working towards that target. We currently have, as of 4 October, nine staff members in our Adelaide office and we're expecting that, by January, we should have up to 18 staff members.

Senator GALLACHER: Excellent. What is the percentage of this? Is that in the total budget of the agency? What percentage of your total budget will Lot Fourteen represent? Ten? Twenty?

Ms Dailey: In what sense? In terms of staffing costs?

Senator Canavan: Staff numbers?

Senator GALLACHER: Annual budget allocation for the South Australian office of the Australian Space Agency, including full-time employees.
Dr Clark: What we can provide for you is, by the end of January 2019, the proportion of staff and the dollars allocated that will be in South Australia. We can provide that to you if you're comfortable with that. We can give you that number. Because we're quite small and we have quite a small headcount, we haven't broken that down. But we can provide you that by January 18, if you're comfortable with that.

Senator GALLACHER: All right, take that on notice. Does the South Australian government make a contribution to the agency's Adelaide operations?

Dr Clark: I think that the South Australian government doesn't make specific allocation to our operations, but, in fact, there is significant interaction with the South Australian government. The future home of the agency will be in the McEwin Building. That's really leveraging off the full refurbishment of that building as well as the South Australian government's intent to have an adjacent cybersecurity centre, which will provide a lot of critical mass and leveraging off small to medium-size enterprises there, as well as other agencies and other groups that will be co-located alongside us at Lot Fourteen.

Senator GALLACHER: But they won't contribute to the Adelaide agency's operation?

Dr Clark: No, I'm just saying that we do, and are thankful for the contribution from the South Australian—

Senator GALLACHER: That's fine. Does that include this proposed mission control centre?

Ms Dailey: I can probably provide some clarity to that. Under the Adelaide City Deal, the South Australian government committed $2½ million towards the mission control centre, which is planned to be located in the McEwin Building, which will also house the Australian Space Agency. That is complemented by $6 million under the Space Infrastructure Fund, which we've already talked about. The South Australian government are actually the head lease for level 3 of the McEwin Building, so they have got some interest on that floor, but I'm not familiar with what that actual amount is.

Senator GALLACHER: How many days is the chief executive active in Adelaide? Is there an expected level of attendance in the Adelaide operation?

Dr Clark: As head of the Australian Space Agency, I'm afraid I'm not in any place very often. Obviously, the role requires me to be in all states and territories as well as meeting the international obligations. I'm very happy to provide a breakdown of my location for the last 12 months.

Senator GALLACHER: I can recommend Adelaide. You get a good lunch there.

Dr Clark: I very much enjoy my time in Adelaide. I think we're just seriously excited. With the McEwin Building, Lot Fourteen, our new home, mission control, the discovery centre and building our team in Adelaide, it is truly exciting to be located right in the centre of town, surrounded by like-minded groups and other groups active in space as well as cyber and defence. It is going to be extraordinary.

Senator GALLACHER: How many times is the agency's board going to meet in Adelaide? Do they do that?

Dr Clark: We have just appointed our advisory board, and it had its first meeting. We are planning its second meeting to be in Adelaide next year.
Senator GALLACHER: So you'll probably have one a year or one every six months?
Dr Clark: The advisory board will meet twice a year, and our industry leaders forum will meet once a year.

Senator GALLACHER: Is there an agreement to have the agency's headquarters in Adelaide?
Dr Clark: That decision has been made already. The headquarters of—

Senator GALLACHER: What's the duration of the agreement to have the agency's headquarters in Adelaide? You know what Perth's like.
Dr Clark: I don't think there has been a time frame put. The decision by government is that the headquarters will be in South Australia.

Senator GALLACHER: So there's no duration. It's just an agreement that that's where it is.

Senator PATRICK: It's certainly not going to be in Canberra.
Dr Clark: It's been a decision by government that that's where it will be, yes.
CHAIR: What's the duration that the department has been here?

Senator GALLACHER: Is it in December that the Adelaide office will be fully operational?
Dr Clark: No, we made sure that we didn't lose time in terms of being operational out of Adelaide. Whilst, as Ms Dailey outlined, we expect to be into our new offices just before Christmas this year, we established our interim offices in Adelaide immediately upon the announcement, and we have been building the team there. So we didn't wait until our offices were built. We wanted to get up and running immediately.

Senator GALLACHER: And you've got nine staff and you're going to 19?
Dr Clark: Ms Dailey mentioned that we have nine there currently, and there will be 18 by the end of January.

Senator GALLACHER: Excellent. Thanks very much.
Dr Clark: Not a problem.

Senator PATRICK: Can I just say to Dr Clark: my office is about 150 meters from Lot Fourteen. If you ever need some local knowledge, I'm happy to have a coffee!
CHAIR: That's even more gratuitous than me!

Senator PATRICK: I was also going to say that every new agency that's established in Adelaide gets a free lunch or dinner with Senator Patrick.
CHAIR: That's a penalty!

Senator Canavan: To add some information on a question asked by Senator Hanson-Young earlier: I've been informed that Shell provided Questacon with funding of $3.25 million, excluding GST, from 2014 to 2019.

Senator McALLISTER: I've got a couple of process questions around where to ask about certain things, because that may assist us in managing the rest of the afternoon's program. I want to ask about the entrepreneurs program.

Ms Kelly: That is the main department, which is where we currently are.
**Senator Canavan:** Yes, we're there currently.

**Senator McALLISTER:** So stick with that in outcome 1?

**Ms Kelly:** Yes.

**Senator McALLISTER:** And I want to ask about the Manufacturing Modernisation Fund.

**Ms Kelly:** That's also one of the current—

**Senator McALLISTER:** Also outcome 1?

**Ms Kelly:** Yes.

**Senator McALLISTER:** Beyond that, I wouldn't mind talking about cyberskills and Australian-made branding.

**Senator Canavan:** That's this area.

**Ms Kelly:** Yes, that's this current outcome.

**Senator McALLISTER:** I was just hopeful that they might perhaps be in program 2 or something, and we'd be able to let people go. From my end, that's pretty much it.

**Ms Kelly:** I wonder if I could just clarify whether you'd like to just resume with the department at 3.45. The Chief Scientist will be here at 3.45.

**CHAIR:** No, we will be resuming with the department, so we will finish with the department and then move to the Chief Scientist.

**Senator McALLISTER:** You should understand we don't have a great deal more to do for the department—depending on the answers.

**Senator PATRICK:** I have some CodeMark questions to ask.

**CHAIR:** Where does that fall?

**Ms Kelly:** That's this current outcome.

**CHAIR:** The Space Agency can leave the building. Everyone else will have to remain.

**Senator Canavan:** Can I just clarify, on Senator McAllister's point: my understanding is that program 2 is with us at the moment. It's only 2.4 and 2.5 this evening, so the agendas might be a little bit unclear.

**CHAIR:** We are all getting across it.

**Proceedings suspended from 15:33 to 15:52**

**CHAIR:** We will resume. We are still with the Department of Industry, Innovation and Science. Just a brief update: we understand the Chief Scientist has to get to the airport, so we will stay with the department for a little while but then we'll move to the Chief Scientist. We will get him out of here in plenty of time, and then we'll come back to the department.

**Senator McALLISTER:** I wanted to ask about the Entrepreneurs' Program and, in particular, the accelerating commercialisation element. In the annual report you indicate that in 2018-19 there were 83 grants worth a total of $35.96 million awarded to business. Is that correct? It's on page 20 of the report.

**Ms Tressler:** Yes, that's correct.
Senator McALLISTER: As I understand it, this is a grant system that allows businesses to apply for support and receive a matched grant for up to $1 million. Is that correct?

Ms Greenwood: Yes, it is.

Senator McALLISTER: The annual report indicates that there were 83 grants. Did each of those 83 grants go to a different business?

Ms Greenwood: I'd need to check and give you those details. I don't have that information with me at the moment.

Senator McALLISTER: So it's possible that the number of businesses that received support from the program is less than 83?

Ms Greenwood: I understand it was 83 unique grants. In some cases we have businesses that get a multiple grant. However, it would be unlikely for businesses to get a grant within the same 12-month period. If I can check, I will make sure that I have the correct information for you.

Ms Kelly: The grants relate to the commercialisation of a new-to-market invention. From time to time, someone who comes up with one idea that qualifies for a grant subsequently comes up with a further idea and that further idea may also qualify for a grant. I can certainly recall at least one case where a person was in the process of applying for a second grant because they had a second new-to-market invention that they were seeking to commercialise.

Senator McALLISTER: What are the criteria for receiving a grant?

Ms Greenwood: An eligible applicant must have a novel product, process or service they wish to commercialise, and they also need to be a for-profit registered company operating in Australia, a commercialisation office or eligible partner entity or an individual partnership or trustee who agrees to form a for-profit company. Other eligibility requirements apply, including matched funding, rights to intellectual property and a less-than-$20-million-turnover test.

Senator McALLISTER: It must have less than 20 million times in turnover—so small firms or entities only. Are there any other criteria that are applied in assessing whether or not a grant will be awarded? There are, as I understand it, the eligibility criteria, the threshold criteria, to be considered. What determines whether or not a business will ultimately receive a grant?

Ms Greenwood: There's also a need for funding merit criteria. That needs to be demonstrated in applications. They are assessed against five equally weighted merit criteria, which I can read through for you. They are market opportunity, the value proposition, the execution plan, management capability and national benefits. Then additional credits are also provided under the national benefits criteria to applicants that have projects within the growth sectors.

Senator McALLISTER: How are the applications handled? Are they accepted on an ad hoc basis or do you conduct rounds?

Ms Greenwood: No, there aren't rounds. They are accepted through a process where they are taken on a six- to eight-week lead cycle through to the Entrepreneurs' Program Committee, which then assesses them against the criteria that I have just run through, and then it will make a recommendation to the delegate, but the program doesn't run in rounds.
Senator McALLISTER: Who's on the committee?

Ms Kelly: It's not usual for an individual or a corporate entity with a new-to-market invention idea to out of the blue put in an application. We employ advisers that work with inventors to ensure that they are covering those five criteria. They often work with them over extended periods of time to help them prepare an application that then goes through the process Ms Greenwood has outlined. So applications don't just arrive out of the blue. We work with companies to assist them to put together their application, and often they have to do a lot of work, particularly in relation to market opportunities, an area where they need to work with our experts to demonstrate they've done the work to identify a market for their product in the event that it is commercialised.

Senator McALLISTER: So how does one get admitted to this first stage of support? How is one selected for that process?

Ms Greenwood: Organisations or businesses will put in an expression of interest for the Entrepreneurs' Program, and then the advisers that Ms Kelly has referred to will then help work through those. They will also look at whether they meet the core eligibility criteria.

Senator McALLISTER: So the advisers are employees in the department?

Ms Greenwood: The advisers are contracted by the department. They are contracted on the basis that they have industry knowledge and experience working on commercialising products and identifying innovative products.

Senator McALLISTER: How many advisers are contracted by the department?

Ms Greenwood: Twenty.

Senator McALLISTER: So they make the decision about whether or not you are engaged in the Entrepreneurs' Program, and they support participants in the program, in some circumstances, to develop grant applications, which are then considered by a board, did you say?

Ms Greenwood: I'll run through it for you in some more detail. Applicants submit an expression of interest. That's then reviewed by departmental staff in the first instance to make sure that it meets suitability and eligibility for the program. If suitable, it's generally referred to one of the commercialisation advisers I just referred to or, if appropriate, we will refer it to other assistants outside the commercialisation program. Where the EI is referred to a commercialisation adviser, they actually provide some initial guidance on the commercialisation project and then at that point grant applications are assessed against the eligibility criteria by the department. It's the department that does that assessment, not the commercialisation advisers. Then, if eligible, the commercialisation adviser conducts a due diligence review and looks at the claims made by the applicant against the merit criteria again before the application is referred through to the entrepreneurs' committee for consideration by that committee.

Senator McALLISTER: Who's on the entrepreneurs' committee?

Ms Greenwood: It is chaired by Mr Anthony Surtees, and Ms Jan Bingley, Ms Bessi Graham, Dr Carrie Hillyard, Ms Rachael Neumann, Mr Steve Telburn and Dr James Williams are its current members.
Senator McALLISTER: Are any of those people employees in the Australian Public Service, or are they independents?

Ms Greenwood: They're all independent of the Australian Public Service.

Senator McALLISTER: I can see that there are a number of points of review. Departmental staff review an initial application to get involved in the program. Any grant application is assessed by the department and then by the entrepreneurs' committee and then it is referred to the minister for approval?

Ms Greenwood: No, it's referred to the general manager of the Entrepreneurs' Program, who is the delegate for decisions regarding this part of the program.

Senator McALLISTER: That's an employee in the APS?

Ms Greenwood: Yes, that's actually me at the moment.

Senator McALLISTER: Congratulations, Ms Greenwood! At any point in this process do the minister or his staff have involvement in assessing applications either for participation in the Entrepreneurs' Program or for grants under the Accelerating Commercialisation program?

Ms Greenwood: No.

Senator McALLISTER: When do you advise the minister that you intend to provide a grant?

Ms Greenwood: The process is that I make a decision as the delegate, and at that point we provide a briefing to the minister's office prior to making announcements.

Senator McALLISTER: Does the minister have any capacity under the program arrangements to prevent a grant from being provided?

Ms Greenwood: No.

Senator McALLISTER: I understand the maximum size of the grants is $1 million. Can you tell me the average size of the grants in the last financial year?

Ms Greenwood: I'm afraid I don't have that information with me, but I can provide it.

Senator McALLISTER: Thanks.

Office of the Chief Scientist

[16:02]

CHAIR: Do you wish to make any opening remarks?

Dr Finkel: No, I'm happy to take questions.

Senator GALLACHER: Dr Finkel, I want to go to your Independent audit of NOPSEMA'S consideration of exploration in the Great Australian Bight. I know that that's a publicly available document. Interestingly enough, most of the audits I read are from the Australian National Audit Office, and they actually have 'recommendations' rather than 'opportunities'. You have characterised some opportunities for NOPSEMA and, I think, the government. Can we step through some of those opportunities? Your executive summary, if people are looking for a succinct and short version of the report, is exceedingly clear and unambiguous. I want to walk through some of the opportunities that you see. In the first opportunity, you say:
NOPSEMA could enhance transparency during the assessment and decision-making process …

What does that look like? Has the agency accepted that? They will be here later on tonight. Do you get formal feedback where the agency says, 'Yes, we've looked at all of those opportunities. We note, accept or reject'?

**Senator Canavan:** I'll let Dr Finkel talk about the report, but, just to inform the committee: yes, NOPSEMA and the government have accepted all of the recommendations—

**Senator GALLACHER:** Opportunities.

**Senator Canavan:** Or opportunities. We're in the process of implementing those.

**Senator GALLACHER:** All of the opportunities in their entirety?

**Senator Canavan:** Yes.

**Senator GALLACHER:** Excellent. If you can briefly summarise in your words where these opportunities are.

**Dr Finkel:** The essence of what we found is that NOPSEMA is really a first-class regulator that takes into account all the requirements of the environmental regulations, takes into account the latest scientific evidence and takes into account the relevant issues that have been raised through community submissions. It has a highly skilled workforce that is assigned to do that in a very organised way. We found that their organisational credibility was very high. But the process is not all that visible to the community. When things aren't visible, people suspect that there's something that is being hidden, even when there's not.

We recommended that at certain touch points there should be more visibility. It's already there when the environmental plan is being considered. The applicant has to publish that and there are 30 days for communities to submit against that environmental plan. But then it goes into NOPSEMA, and NOPSEMA takes into account all of the community's submissions. The applicant has already addressed them in the final version of the environmental plan. It may be that if all goes splendidly well NOPSEMA would approve the application straightaway and publish its approval. But, realistically, in very, very complicated environmental plans and applications like this, there are, for perfectly legitimate reasons, questions that will come from the regulator asking for further exploration or additional clarity from the applicant around their environmental plan in this case. Those questions are not made available to the public. The reasons for an extension or a temporary pause on proceeding are not made clear, and people suspect that something is not right. We recommended that at those points NOPSEMA should publish a summary—not word for word on every single question in detail—of what the main issues were, for the public to have some understanding of the main issues.

**Senator GALLACHER:** I've had briefings with Geoscience Australia and NOPSEMA. There seems to be a feature of where we talk about fracking or drilling that the scientists and the people who take into account the environmental consideration seem to lack that explanatory process which settles the arguments, so to speak. There is not as much clarity as there should be—is that what you're saying?

**Dr Finkel:** The process is very robust. It's just that they're not inside NOPSEMA, so they don't get to see it. It's not practical for everything that NOPSEMA does to be published. But NOPSEMA, for example, doesn't just look at the scientific information that is on government websites. They look at the best and latest available scientific information that should have been referenced in the environmental plan. Even if it weren't, they would look at it. There is
no issue with the depth of the review that goes on; it's just a question of the people knowing
that it has gone on and understanding that, if NOPSEMA has gone back to the applicant with
a request for them to either resubmit or clarify certain issues, at critical points—not all the
time—NOPSEMA should publish a public summary.

Senator Canavan: Senator, I certainly accept and agree with your proposition there,
although I would say it's not primarily NOPSEMA's job to make those explanations to the
broader public. Their job is to focus on regulating safety and environmental matters to the
highest standard. The primary people responsible for that are the broader industry and
proponents who are suggesting these projects. I note that in Dr Finkel's report he also
identified an opportunity: that titleholders or those seeking to conduct drilling activities or
other exploration activities could themselves explain some of the risks better—in particular,
the oil spill modelling processes. They're obviously very complex, but they're often prone to
misinformation and miscommunication. I have also written to the industry asking them to take
on board Dr Finkel's opportunities that have been identified and see what they can do to
improve.

Senator GALLACHER: Clearly our community is such that people can hold any view
they like and they can represent that at any Senate hearing or any forum that's open for them
to do that. I've been party to inquiries where several witnesses have said, 'No matter what the
science says, we're against it.' I think there's evidence that there might have been 30,000
submissions to NOPSEMA, in a form way, which they have to deal with. We'll ask them later
on how they actually do that. But clearly there's a high degree of organised activity against
fossil fuel exploration and drilling. So it becomes really difficult for a regulator to cut through
in that environment. Is there anything in your opportunities that makes it easier for them to do
that?

Dr Finkel: Not on that specific issue. The regulator does cut through. They are
responsible for looking at every single one of those 32,000 submissions. They are responsible
for analysing them to categorise them. There's a lot of repetition, of course, in many of those
submissions. They have to in particular take note of submissions from people who are deemed
to be relevant persons but they also have to take notice of relevant issues from the general
public. They've got the staff. If they don't have the staff, they contract in extra people to do it.
They work their way through it. They summarise the issues. It was a huge workload for them
in this particular case; 32,000 is not the norm. My understanding is that typically for an
exploration licence application and environmental plan for an application there would be
fewer than 10 objections than, say, in other states. But this is the first time since 2003 that an
application to drill in the Great Australian Bight has taken place. And of course people's level
of concern and awareness across a broad range of environmental issues have matured
evermously or changed enormously in that time. So it was all very new for the South
Australian public.

Senator GALLACHER: I think it's probably not as well-known that NOPSEMA has a
role when we're decommissioning sites too, which can be just as environmentally contentious,
particularly in respect of Bass Strait and the like.

Senator Canavan: They'll be able to speak at length at that if you like, Senator. It's a
relatively new area of regulatory assessment too, because the oil and gas sector as a whole
across the world is roughly only about half a century old, so we are starting to get to the first
time when some large offshore platforms are being decommissioned around the world. So they're doing a lot of work on that at the moment, but that question will have to go to NOPSEMA.

**Senator GALLACHER:** In summary, you've found them to be a relevant organisation undertaking their duties within their legislative framework and at their upper end of performance.

**Senator Canavan:** Yes.

**Senator GALLACHER:** All of the opportunities have been picked up by the government?

**Senator Canavan:** We've agreed to all of them. I've written to NOPSEMA and APIA—in APIA's case, asking them, obviously, to consider the opportunities. In NOPSEMA's case, I've issued them with a renewed statement of expectations. They will inform soon and update their statement of intent on their website. They fully agree to the changes, so they'll be implemented in due course.

**Senator GALLACHER:** In finishing, most of us on this end of the table have received various levels of interactions from the opponents of 5G. Are you aware of any scientific or any other evidence that would give us concern about the 5G spectrum?

**Dr Finkel:** You're asking about health impacts of the 5G spectrum?

**Senator GALLACHER:** Yes.

**Dr Finkel:** I have not specifically looked at that for 5G, but I have looked at the health impacts for electromagnetic radiation for mobile phones, up until a couple of years ago, and for overhead powerlines. A vast literature exists; tens of thousands of studies have been done. The World Health Organization has done a meta-analysis of all of those studies and can't find any consistent evidence of problems or concern.

When looking at something like that, I think you have to look at two things. You have to say, 'Is there a hypothesis of how there could be a health impact of electromagnetic radiation, the radiofrequency waves?' and then you've got to say, 'Is there any evidence?' And there is no hypothesis for how electromagnetic radiation could interact at the single-cell level to do any chromosome damage or any long-term damage. The only way that electromagnetic radiation interacts with tissue is: if it's intense and it's very close, at magnitudes much higher than you would get from a phone, you can get some local heating. But, in terms of long-term health benefits, as far as I've seen from where I've looked, there is no mechanism or evidence of a problem. It could be argued that, with 5G, the wavelengths are shorter, and shorter wavelengths are more likely to interact with DNA and chromosomes, but, compared to the molecule in a cell, in the nucleus, they're still gigantic, and they don't interact.

**Senator GALLACHER:** Is this an area where the scientific community is looking for someone with a hypothesis or is it just business as usual?

**Dr Finkel:** As far as I'm aware—and I've not been looking at it specifically—there is ongoing scientific research into the potential health impacts, and consistently the evidence is that there is not.

**Senator GALLACHER:** So you'd be happy to have a 5G phone?

**Dr Finkel:** I would be very to have a 5G phone—near my ear or in my pocket.
CHAIR: You are on the Hydrogen Strategy Group.

Dr Finkel: I'm leading it.

CHAIR: Sorry; you're chair?

Dr Finkel: Yes.

CHAIR: We've been hearing about a hydrogen economy for quite a long time now. What's the strategy group doing? Can you just give us a brief update?

Dr Finkel: Just the context there: there was a group called the Hydrogen Strategy Group, which I chaired, and it prepared a briefing document, or a vision statement, for the COAG Energy Council—that's the energy ministers. That was submitted in August of last year. As a result of that, the ministers invited me to come back in December of last year with a proposal of how a national hydrogen strategy could be developed. In December they agreed that that should take place, and so a new group was formed, called the COAG Hydrogen Working Group, which I also chair. It has been working all year to develop a national hydrogen strategy.

The premise here, worldwide, is that, over the decades—we're not talking about transition that will be significant in a small number of years but over several decades—there will be an increasing shift towards zero-emissions electricity as our primary energy source, in order to decarbonise. Whilst that's terrific and electricity is very versatile, it's not always convenient. Mostly it is. Maybe 80 or 85 per cent of our energy needs could be met through electricity, as electrons, but sometimes you need a high-density transportable fuel, and that's more convenient in the form of a gas or liquid, similar to what we've got natural gas or with petrol. But, if you want a zero-emissions high-density transportable fuel, the obvious candidate is hydrogen, because, when hydrogen is burnt, you get the energy that you want, and the only by-product you get is water vapour. So there is enormous interest from most countries in Europe, from big states in America like California and from our Asian neighbours. Our historic trusted trading partners Japan and Korea are very, very interested in hydrogen as a product that they would import, ultimately in replacement of fossil fuels, to help them decarbonise their economy.

For Australia, that means there's an opportunity for us to look at hydrogen for its export potential and also for domestic applications. The critical thing is: where does hydrogen come from? You can't go anywhere on earth and drill a hole and find hydrogen gas in the same way that you would find natural gas. You have to produce it. You could argue it's not an energy resource; it's a manufactured product. There are several ways of producing it. The way that most people are interested in—but it's not the only way, by any means—is from water. Water is H2O. You can separate water into the 'H' and the 'O', the hydrogen and the oxygen, by passing an electric current through it. If the electricity comes from solar or wind or hydroelectricity, or, frankly, if it comes from nuclear electricity, you've now got zero-emissions electricity splitting water into hydrogen and oxygen. The oxygen could be released—that's not a problem. The hydrogen could be compressed, put into pipelines, used directly for domestic purposes or liquefied and turned into liquid hydrogen and exported to countries that have an interest in bringing in a zero-emissions fuel.

We're looking at how Australia can capture the opportunities and be a significant exporter as well as an experienced domestic user of hydrogen. To do that, the strategy is developing a
framework that will optimise the conditions to make it easy for industry, state governments, federal governments, consortia and others to build the hydrogen industry.

CHAIR: All right; I'll leave it there. Senator Patrick.

Senator PATRICK: In relation to the conversation you were having about 5G, I would have thought, noting it's been rolled out internationally, that there would have been a number of papers internationally and that places like Europe would have looked at it from a regulatory perspective. Is that the case?

Dr Finkel: I don't know. I've not been asked to look at it. The last time I looked—and it was for personal reasons, before I was Chief Scientist—at the question of health impacts from electromagnetic radiation, either from overhead powerlines or from telephones, because they're both using electromagnetic radiation, just at different frequencies, I found that there were a vast number of studies, many meta-analyses. The most significant was one done by the World Health Organization for the United Nations, which looked at over 20,000 individual studies, and the conclusion was that there were no health impacts of electromagnetic radiation from phones or from overhead lines. That doesn't mean to say that from time to time you won't find a problem where a community is suffering from an unusually high number of cancers or some other disease and they happen to be a community that's located close to a high-voltage powerline. But, when you do the statistical analysis across many, many countries, it just turns out to be a statistical aberration. I cannot say with confidence that 5G is not different, but I cannot see any logical reason why 5G would be worse. You could make the argument that, because 5G is using ever-shorted higher frequencies and therefore ever-shorted wavelengths, you're getting down to the point where they might interact at the molecular level, but, even at the higher frequencies and shorter wavelengths of 5G, those wavelengths are still very large compared to the dimensions of the nucleus.

Senator PATRICK: Obviously electricity would have quite a large wavelength.

Dr Finkel: The wavelength of electricity is huge; it's many kilometres.

Senator PATRICK: What is it at 5G? The antenna would tell you that size, wouldn't it?

Dr Finkel: It's as high a frequency as the phones; you are talking about metres getting down to a few centimetres.

Senator PATRICK: It's down to the size of an antenna tip.

Dr Finkel: Yes, but a few centimetres is still gigantic compared to the size of the atoms in the molecular DNA structure.

Senator PATRICK: Thank you for that.

Ms Kelly: But, Senator Patrick, I would note the Department of Communications and the Arts does monitor those International studies and the state of research in the area. I know that because I've been to a briefing with them. So they would be up to date with all the most recent research in relation to the issue.

Senator PATRICK: Yes, and so there's no need to repeat a study that's been done by a reputable body overseas, because the Australian environment is not going to change anything in regard to the effect of an electromagnetic wave, one presumes?
Ms Kelly: The Department of Communications and the Arts is absolutely across all of those and would have answers for all those questions, and it's their responsibility to monitor and remain up to date with all of that research.

Senator PATRICK: Thank you.

Senator SINODINOS: Chair, just to follow on from your questions about hydrogen, there was a project we were undertaking in the Latrobe Valley. I think you might be responsible for that, Minister.

Senator Canavan: I think you might have had a significant role in that project, Senator Sinodinos. Are you putting a pitch in for the naming rights?

Senator SINODINOS: No! But can you tell us what progress there is with it?

Senator Canavan: I might start. Both Dr Finkel and I were at a sod-turning event earlier this year for the Kawasaki Heavy Industries project—or the Hydrogen Energy Supply Chain project, which is its more formal title. It's a joint venture, if you like, between the Australian and Victorian governments and Kawasaki Heavy Industries from Japan. They have their own consortium, with a number of players involved from Japan. It's a complex project. It's a supply chain project, as per the name of it. It is seeking to construct a pilot plant for the production of hydrogen from brown coal in the Latrobe Valley. It's one of the other methods that Dr Finkel was mentioning for the creation of hydrogen. It's real innovation, I suppose, will be that it's a world-first shipment—or, my understanding is that it's a world first—of liquefied hydrogen by vessel to another country.

I was in Japan a few weeks ago, and things are tracking well. A ship is being built—the world's first such ship—to carry that liquefied hydrogen. It's expected to leave Japan later this year, and I think the plan is that by late next year or early the following year will be the first shipment. I think that's the idea of that.

So it's going very well. Dr Finkel, did you have any further things on that?

Dr Finkel: No, you've described it very accurately. It's a major endeavour, as the minister said. It's a pilot project—in fact, it's really a proof-of-concept project. They will make a commercial decision whether to proceed or not probably in 2022 or 2023. But if they do, it would be very large scale. The essence of this is, as I said before, that the way most people talk about making hydrogen is from water, but you can make it from fossil fuels. You can make it from coal or you can make it from natural gas. If you make it from coal, it's a process called gasification; if you make it from natural gas it's called steam methane reforming.

Today, that's a significantly cheaper way of making hydrogen than from electrolysis. But the long-term consideration is that if it's going to be imported by countries from 2030 onwards then they're going to expect that it's clean hydrogen in the sense that the vast majority of by-product—carbon dioxide—that comes out of the process will have been captured and sequestered.

Senator SINODINOS: And that's part of this project, isn't it?

Senator Canavan: Yes, I should add on that point that there is a related project called the CarbonNet Project. It is separate from the Hydrogen Energy Supply Chain project, but it's an initiative, again, between the Australian and Victorian governments to find suitable locations in the Bass Strait for carbon sequestration. The project was not initially aimed to benefit the
Hydrogen Energy Supply Chain project but, obviously, there are other carbon emission activities in the Latrobe Valley which could benefit from such a sequestration location. But the idea now is, if this project is to proceed to a commercial phase, that it will be seeking to piggyback off the work that CarbonNet is doing to find that location.

Good progress has been made there. It's primarily the Australian and Victorian governments doing that work. We're hopeful of finding suitable locations, given that it's an oil and gas basin in a former way, in some instances. I'll correct the record if I'm wrong, but I think that Sumitomo Corporation, a Japanese company, has just come on board to help us out on that as well.

Senator SINODINOS: Very good—good luck with that. I'm sorry Senator Roberts isn't here! I know he'll be missing this.

Senator Canavan: This brings everyone together! There's coal, there's sequestration—

Senator SINODINOS: The whole shebang!

Dr Finkel: We love all things. It's all good stuff.

CHAIR: Thank you, Dr Finkel, and safe travel home

Dr Finkel: Thank you, Chair.

Department of Industry, Innovation and Science

[16:29]

CHAIR: We will return to the department.

Senator WALSH: The questions that I have relate to the issues around the Australian Made logo for vitamin supplement manufacturers. Are you the right people for that?

Ms Kelly: Yes, Mr Squire will assist with that.

Senator WALSH: Mr Squire, on 5 April, the government committed to fixing this unintended regulatory situation where vitamin manufacturers can no longer use the Australian Made logo or information on their labels. Are you able to outline what actions have been taken since then—so, in the last six months—to address that issue?

Mr Squire: Certainly. Since the last estimates period, we've been working to secure the necessary approvals from the state and territory governments to amend the Australian Consumer Law to enable the complementary medicine industry to make 'Made in Australia' claims and, therefore, restore access to the Australian Made, Australian Grown logo. On 3 October, the minister released a consultation regulation impact statement, which outlined the various options that would enable the restoration of access to the logo. That consultation RIS was prepared by the department, with assistance from our Treasury colleagues. Both the department of industry and the Treasury have been working with our consumer affairs forum and industry counterparts in the states and territories—

Senator WALSH: Mr Squire, you're going very well at giving detailed information and I'm failing to keep up with you. Can you go back to what was done in October? There was a memo from the minister?

Mr Squire: Yes. Earlier this month the minister released a consultation regulation impact statement. That was on 3 October.
Senator WALSH: Was that an update on the process so far in relation to approvals from states and territories?

Mr Squire: The Australian Consumer Law is a single law that is enforced by both the Commonwealth and the states and territories. That law is supported by an intergovernmental agreement, and, to amend the Australian Consumer Law, we need the support of the Commonwealth and four of the state and territory governments.

Senator Canavan: That regulation impact statement is simply to outline what the options are to deal with the issue. The government has announced that take steps to ensure that those in the complementary medicine space can continue to use the 'Made in Australia' logo. The consultation RIS outlined some options for doing that, and so we're seeking feedback from industry, from state governments, I presume, and other stakeholders, before finalising an option to get the support through that intergovernmental agreement.

Senator WALSH: Is there a timetable coming out of that RIS for resolving this?

Mr Squire: The consultation RIS is open until 30 October. We've already received some submissions and expect to receive a few more in the next week. From there, the department will prepare what's called a decision regulation impact statement, and that's what is proposed to be put to the consumer affairs forum ministers for a vote.

Senator WALSH: When's that decision regulation statement due?

Mr Squire: The department will be working as quickly as possible to provide that decision RIS to the consumer affairs forum for a vote. It's dependent on the issues that are raised in the submissions as to how long it will take us to prepare and finalise the decision RIS.

Senator WALSH: Have you got a ballpark date? I'm new to this. Is it November, is it next year or is it the year after?

Mr Squire: The minister has made it clear that the Commonwealth government would like to see this regulation in place by the end of this calendar year. Working back from that time frame, we would need to put the decision RIS before CAF, the consumer affairs forum, in a matter of weeks.

Senator WALSH: Is your evidence that you're on track to do that?

Mr Squire: I'm confident that we'll be able to do that.

Senator WALSH: Thank you.

Senator McALLISTER: Senator Pratt has a handful of questions and then that is it for Labor senators for the department, until we get to the other later scheduled elements.

CHAIR: Senator Pratt.

Senator PRATT: I've got a question about the Manufacturing Modernisation Fund. The government has announced $160 million. However, it appears that only $50 million of that is government funding. Is that correct?

Ms Kelly: The remaining amount is matched funding, so there's $50 million government funding, and the remainder of that amount is matched funding from industry.

Senator PRATT: Matched from where?

Ms Kelly: I might get Mr Power to answer those questions.
Mr Power: It will be matched from participants who apply into the fund.

Senator PRATT: So you've announced other people's investments as part of your fund?

Mr Power: That amount does include that, it's true.

Senator PRATT: It did sound like the government had announced a $160 million fund, but it's $50 million from the government. Is it possible for you to give me a breakdown of the components of that $50 million into grant type and how the funds are released over the forward estimates?

Mr Power: I might ask my colleagues, Senator, to answer that for you.

Ms Ryan: DIIS Grants Administration administers the fund on behalf of our colleagues. Can you repeat the question? You would like it broken down—

Senator PRATT: I want a breakdown of the components of that $50 million into grant type and how they're released over the forward estimates.

Ms Kelly: There are two components to the program. There is $20 million in matched grants between $50,000 and $100,000 for small-scale technology and efficiency investments, and $30 million of the amount is for larger-scale grants of up to $1 million on a three to one funding basis to support transformative investments in technologies and processes.

Senator PRATT: How will that $20 million and $30 million be released over the forward estimates?

Ms Kelly: I might need to rely on Ms Ryan for the phasing of that.

Ms Ryan: The breakdown of the funding over the forward estimates is $10 million in 2019-20, $20 million in 2020-21 and $20 million in 2021-22.

Senator PRATT: Is that for the $30 million or the $20 million?

Ms Ryan: That's combined.

Senator PRATT: You might take on notice to split that again into the two different components.

Ms Ryan: Yes, we can take that on notice.

Senator PRATT: Why did the government decide on a grants based approach rather than concessional loans?

Ms Kelly: I think this was an election commitment, so it was a government announcement in the context of the election campaign.

Senator PRATT: Is there an evidence base to the choice of grants rather than concessional loans? It hasn't been through a policy development process in the bureaucracy?

Senator Canavan: I'll have to take that on notice. I'm only representing the minister responsible. As has been said, it was announced during the election, but I'll take that question on notice.

Senator PRATT: If you can take on notice what evidence underpins the choice of a grants approach rather than a concessional loans scheme and what work was done in a policy sense for this announcement. What evaluation of the program will be undertaken?

Ms Kelly: The program, as all of our programs are, will be set up in accordance with our evaluation framework. I'll ask Ms Ryan to detail that.
Ms Ryan: As Ms Kelly mentioned, as with all of our programs, there will be an impact evaluation at the end of the program.

Senator PRATT: Are there expected outcomes? Given it was an election announcement, have you gone in and retrofitted expected outcomes to it?

Mr Power: There are targets for matching of the funding. Obviously, as we mentioned at the start of the program, they are reflected in some of the forecasts, and we'll be monitoring those and outcomes in relation to jobs et cetera as part of the evaluation.

Senator PRATT: Thank you.

Senator PATRICK: I've got some questions in relation to CodeMark. Mr Power and Mr Bourne, I understand you are the administrators of the CodeMark scheme; is that correct?

Mr Power: No, Senator. I'll give just give a quick outline, if you like, and Mr Bourne, who is from the ABCB, might add to that. JAS-ANZ is the overseeing body of the CodeMark scheme. Then there are certifiers that sit underneath that scheme. So the department doesn't run that scheme, nor does the ABCB. However, the CodeMark scheme is for products which are then used in building applications, so obviously it's relevant to the work we do.

Senator PATRICK: Do you fund JAS-ANZ for any work?

Mr Power: I don't think we do.

Mr Bourne: I would need to take that on notice, but I don't think we do.

Senator PATRICK: My understanding is—and maybe it's JAS-ANZ that does this—that someone maintains a register of CodeMark certifications; is that correct?

Mr Bourne: Yes, the certificates are registered with JAS-ANZ, and they are also listed on the ABCB site.

Senator PATRICK: So they're on both sites? It's an identical register?

Mr Bourne: I'd need to take that on notice.

Senator PATRICK: One presumes that it would have a temporal component to it and that, over time, CodeMark's certification might change. I should be able to look anywhere in time and see the product that might be in my property and see that it is properly certified?

Mr Bourne: Yes, there is a detailed listing of certificates that are valid, and, if they are withdrawn for any reason, it's an obligation under the scheme for the owner of that certificate to notify consumers.

Senator PATRICK: But it would be important to be able to go back historically to look at a sequence of certifications. If I've got a house that's five years old, what's on the CodeMark register at this point in time is irrelevant to what might be in the building that I've built.

Mr Bourne: That information is available.

Senator PATRICK: I've got a constituent who wrote to JAS-ANZ asking for a history of CodeMark certifications. Returned were three certificates, but my constituent then went on and found a further four. This might be an isolated incident, but it appears to me—on the basis of a sample of one, I concede—that there's something wrong. Do you audit this? It depends on who funds this. I'm presuming the funding comes from the Commonwealth?

Mr Power: Mr Bourne might correct me, but, as I said at the start, JAS-ANZ runs that process, and they do undertake audits of, for example, the entities who accredit under
CodeMark, rather than something undertaken by this portfolio. But we would be happy to take up that issue with JAS-ANZ.

**Senator PATRICK:** I might provide you with some information offline to help you, because, obviously, it would be concerning if the register is not being maintained properly. So, on notice, could you provide me with some level of assurance that that's an isolated event? I will provide the details to you. In terms of enforcement, I've got a copy of a letter here that acknowledges that a particular certification has been withdrawn pursuant to a complaint by a competitor. If a certificate has been withdrawn for some reason—so there's been a recognition that perhaps it should not have been codemarked at that time—is there any sanction that is applied in those circumstances?

**Mr Power:** Again, Mr Bourne might like to add something. We're talking about a scheme that, as I said, is run by others. But what we're aware of, where certificates are withdrawn or particular certification bodies, for example, have been audited and been asked to pull up their socks, if you like, in relation to particular things, then there are conditions that JAS-ANZ puts on those certification bodies that they would need to fulfil or lift their game in particular areas before, for example, certificates can be reissued on particular products. That has happened. We're aware of issues where that's happened and bodies have changed their practices and been reinstated.

**Senator PATRICK:** But, noting the importance of the scheme and the need for it to be accurate, one would presume there's got to be a sanction somewhere. If someone has made a claim, or, indeed, they have a CodeMark certificate but then go and advertise something that's slightly broader than what's on the certificate, you'd have to have a sanction for those sorts of things, wouldn't you?

**Mr Power:** I think we would have to follow that up with JAS-ANZ.

**Senator PATRICK:** Is there any other function that JAS-ANZ performs? Once again, it comes down to: where do they get their money from?

**Mr Power:** I believe there is, but I wouldn't be able to give you a detailed listing of that.

**Senator PATRICK:** Mr Lawson might be helping out here. Did you have anything to add, Mr Bourne?

**Mr Bourne:** Not on the funding of JAS-ANZ. I'm not entirely sure where they get their revenue from. I believe there is a deal of cost recovery associated with it.

**Mr Squire:** JAS-ANZ is underpinned by a treaty between Australia and New Zealand, and it essentially cost-recovers its operations from conformity assessment bodies. Conformity assessment bodies are those people that run accreditation schemes. It might be a forestry scheme or an organic scheme or some sort of professional management scheme. JAS-ANZ doesn't run many schemes in its own right. It ensures that those people that are running companies and organisations that are running schemes do that. They've got the systems and processes to ensure those schemes are being run properly.

**Senator PATRICK:** So I take it from that that your view is that there is no Commonwealth funding. They fund themselves, but they are working under a treaty obligation, which means there must be a certain responsibility that flows back to the Australian and New Zealand governments.
Mr Squire: That's correct. There's no Commonwealth money that's provided directly to JAS-ANZ. JAS-ANZ has a governing board with representatives appointed by both the Australian and New Zealand governments.

Senator PATRICK: In terms of transparency of the scheme, clearly, if you've got a certificate and you want to, in some sense, validate the certificate itself, transparency would be a key element of that. There was a Shergold-Weir report that basically stated:

Availability of all supportive documentation relied upon in making a determination that the product will meet the Performance Requirements is critical to the integrity and transparency of the CodeMark Australia Scheme.

A copy of this documentation should be available on request and its availability highlighted on the Certificate of Conformity.

Are there any exceptions to that rule in respect of transparency?

Mr Power: Not that I am aware of, Senator.

Senator PATRICK: SAI Global is, I believe, the one entity that does the CodeMark certification here in Australia. Once again, I've got a constituent who wrote to SAI Global seeking access to the supporting document that might lie behind the CodeMark certification, and they were denied access to it.

Mr Squire: If I might suggest, if we were able to get some further detail from your office on the specifics of that case, we would then be able to take that up with JAS-ANZ. That doesn't accord with my understanding of how it should work.

Senator PATRICK: It would seem odd. This is a letter from JAS-ANZ, where they talk about that very statement I made about transparency—emphasising the word 'should'—and they say: 'I acknowledge that the protocol indicates a strong preference towards documents being made available publicly, but there may be instances in which a certification body can justify exclusion.' Perhaps I will provide you with the details in these circumstances because I'm concerned that, when they're approached to get access to documentation in a scheme that promotes a particular transparency, someone would be denied documentation.

Mr Squire: I'm happy to take that as a question on notice, and we'll look into the specific details.

Senator PATRICK: Sure. In fact, when challenged, I believe JAS-ANZ, in this particular instance, went off and did their own studies to do some verification, but that study is also not available. It sounds like it's not a Commonwealth entity per se.

CHAIR: The department has taken it on notice, Senator Patrick. I'm not sure there's more we can do.

Senator PATRICK: I understand that, Chair, and I'm grateful for the offer of assistance. I will come back and I will make contact with—Minister Canavan, is it?

Mr Squire: Minister Andrews's office.

Senator PATRICK: I might contact Minister Andrews's office to provide the details.

CHAIR: I believe we can release some people—is that right, Ms Kelly? We are finished with cross-portfolio corporate program 1 and program 2?

Senator Canavan: Except for 2.4 and 2.5.
2.4 and 2.5 are later on in the program—absolutely. We wouldn't want to get rid of those too early, Minister. Any senior officers obviously may be required later, but otherwise everyone else is free to go, with our thanks. We will move to the Australian Institute of Marine Science.

**Australian Institute of Marine Science**

**CHAIR:** I welcome the Australian Institute of Marine Science. Straight to questions—are you happy with that? Did you wish to make any opening remarks?

**Dr Hardisty:** I have an opening statement, if I might.

**CHAIR:** It's not too long, I hope.

**Dr Hardisty:** I can keep it short.

**CHAIR:** If you could keep it to the highlights, that would be wonderful.

**Dr Hardisty:** I will do that. Thanks for the opportunity to make a statement, and I'd like to acknowledge the traditional owners of the land and sea country in all the places that AIMS works, and affirm that their ancient knowledge of sea country is a vital part of our understanding in a time of profound change. I'm sure you are aware of our mission, so I won't restate it, but I will say that all of the people we work with—government, industry, coastal communities and the public—use and benefit from the research and knowledge that our science provides. I'd like to just take a few moments to reaffirm that the science is underpinned by quality, independence and transparency. Many people don't know, but AIMS science is underpinned by 10 quality assurance process steps. I won't go through all 10, but I'd like to mention a couple of them.

**CHAIR:** Please do.

**Dr Hardisty:** We require all our scientists to follow the Australian Code for the Responsible Conduct of Research, and we have our own internal research code of conduct. We also subject all of our reports to rigorous internal peer and supervisor review. We participate in the international peer review publication process, which is the worldwide standard used in all science publishing. Our credo of continuous improvement also means we're now using red on blue challenges internally, using internal and external experts. And every five years we go through a complete review of the organisation.

Our understanding of the marine environment and its ecologies is continually evolving and improving as we collect more data and observe long-term trends and as new technology allows us to peer more deeply into what's going on. It's not perfect, but what we can say is that what we're doing now is better than it was 10 years ago, and our understanding at that point was better than it was 10 years before that. We're not beholden to invested interests. We have no agenda. Our science is about the facts. Accordingly, we're ranked No. 2 in the world for marine science, which is not bad for a small Australian agency.

I was going to talk a little bit about our long-term monitoring report on the reef and a little bit about the Reef Restoration and Adaptation Program, whose feasibility study we just provided to Ministers Ley and Andrews this week, but I'll leave it at that. In conclusion, I'll just say thanks very much, and we're proud to be here.

**CHAIR:** I suspect it will probably come up during questioning.
Senator GALLACHER: Minister, I just want to go to an article in *The Sydney Morning Herald* where science minister Ms Andrews said she had invited environment minister Ms Ley and reef envoy Mr Entsch to the Australian Institute of Marine Science for a full briefing. FOI documents show the briefing was to occur on 30 August, and one of the FOI responses says the event was cancelled. Do you have any knowledge of any of that?

Senator Canavan: I don't personally, sorry.

Senator GALLACHER: Can you take on notice whether it was cancelled?

Senator Canavan: Sure. I'm happy to. Dr Hardisty?

Dr Hardisty: The original plan was for that meeting to go ahead. It was originally scheduled to occur at AIMS headquarters. But a couple of weeks before the scheduled meeting, Minister Ley was invited to go out on the GBR with—

Senator GALLACHER: Sorry, what's that?

Dr Hardisty: The Great Barrier Reef, up in Cairns.

Senator GALLACHER: Acronyms all day every day!

Dr Hardisty: Yes, sorry about that. I'll give you more acronyms before the day is over, I'm sure. They were invited to go on a reef trip out of Cairns with Warren Entsch and so on, so that original triumvirate didn't get together because that meeting happened two weeks before. But, later on, we had a follow-up meeting. I believe Senator McDonald was there and a number of others came down. It actually turned into two meetings, but the same group of people eventually all got to come and talk about the same stuff.

Senator GALLACHER: So were Ministers Wyatt, Tehan and Birmingham and Assistant Minister Duniam all present at a meeting—or is this the same meeting?

Dr Hardisty: I'll have to check on notice. If you give me precise dates, I can tell you exactly who was at each meeting on notice.

Senator GALLACHER: I'm working with a combination of FOI and newspaper reports, trying to piece together a timetable.

Dr Hardisty: We can give you on notice exactly who was present at which of those meetings.

Senator GALLACHER: I haven't been to your institute. Are you in Cairns or Townsville?

Dr Hardisty: We're in Townsville. Please do. It's fantastic.

Senator GALLACHER: I have visited the Antarctica operation in Hobart. Is 30 minutes enough for a briefing the Great Barrier Reef?

Dr Hardisty: When we have visits—for instance, when Senator McDonald came—they're usually around two to three hours.

Senator GALLACHER: Senator McDonald being this Senator McDonald?

Senator McDonald: Indeed.

Dr Hardisty: Yes.

Senator GALLACHER: I sometimes forget there used to be another Senator Macdonald up that way.
CHAIR: And both from Queensland.

Senator McDONALD: There was, but this is the new one.

Senator Canavan: Both from Townsville, to make it easy.

Dr Hardisty: That includes a tour of our National Sea Simulator facility, which is our research aquarium complex, the most advanced in the world. That alone takes 30 minutes and you can see there a lot of the stuff we are doing on the GBR; it's not so much talking, but you can see the work that we're doing and look at the various experiments.

Senator GALLACHER: Similar to the Tasmanian one.

Dr Hardisty: Yes.

Senator GALLACHER: Someone is chairing an inquiry into this area, aren't they?

Senator McDONALD: Indeed, on reef regulations.

Senator GALLACHER: So we might actually come up and have a visit.

Dr Hardisty: You are most welcome. Please do.

Senator McDONALD: It's RRAT.

Senator GALLACHER: I'm not particularly familiar with this area, living at the bottom end of the country. Climate change and coral bleaching are issues that are in the media not infrequently. You mention them in your recent annual report. Does this sort of briefing encompass that sort of level of explanation and detail?

Dr Hardisty: Yes, absolutely.

Senator GALLACHER: Do you go into that?

Dr Hardisty: Yes, we go into that in some detail.

Senator GALLACHER: So this gathering would have encompassed some of those aspects—the meeting that did go ahead?

Dr Hardisty: At the two meetings that I mentioned, in both of the meetings there was extensive discussion of the risks of climate change. Most important, I guess, for us in the marine area, is the impact of warming of waters and waters becoming less alkaline or more acidic on corals and on the marine environment in general. So we go into that in quite a lot of detail, in terms of both the history and what we have seen—the observational record—and also projections for what we think will happen under various trajectories in the future.

Senator GALLACHER: Are there published materials which you present routinely to these types of meetings?

Dr Hardisty: Absolutely, yes. Part of that ranking that I talked about—No. 2 in the world—is based on publications that are available worldwide in the highest quality journals with really high impact, recognised by our peers in the scientific community worldwide. That's the core of what we do. We put out publications that are vetted by the world and recognised in the peer review literature.

Senator GALLACHER: And that is presented to the meeting?

Dr Hardisty: Yes, elements of it. We are putting together a story. You don't want to be reading too many of those papers just straight out. If you are not liking my opening statement, those would be really difficult.
Senator GALLACHER: The reef envoy, Mr Entsch, lives in Cairns, I think.

Dr Hardisty: Cairns, yes.

Senator GALLACHER: Is he a frequent visitor? Has he been briefed?

Dr Hardisty: Yes, we've had multiple engagements with Warren.

Senator GALLACHER: The names of the AIMS attendees were redacted in the FOI documentation. Why would you bother redacting who you briefed? Or was that just an FOI—

Dr Hardisty: Was this the Cairns meeting with Minister Ley? I'm pretty sure I was the only AIMS member, so if I was redacted, that was me.

Senator GALLACHER: That's just a function of FOI, is it?

Mr Ahyick: Yes, the redaction would have been just the non-SES names.

Dr Hardisty: It would have been from the second meeting, which was held at our location. That's just a routine thing for non-SES staff to have their names redacted.

Ms Kelly: You would be aware, Senator Gallacher, that that's the usual practice across government.

Senator GALLACHER: I'm just asking.

Dr Hardisty: You will see my name in there, I'm sure.

Senator GALLACHER: No.

Dr Hardisty: No?

Senator GALLACHER: Basically, under this freedom of information process, if there's a public servant's name, it's taken out?

Ms Kelly: No, the usual practice across government is that SES officer names remain unredacted and officers below the level of SES are usually redacted. That's really just protecting the identity of junior officers. For officers above SES, unless there is some other reason, the usual practice is that their names remain.

Senator GALLACHER: I'm trying to piece together newspaper articles and FOIs. It would appear that the invitations to Minister Ley and envoy Entsch were sent on 9 July. That's about nine days after the minister publicly claimed that she'd already invited them. Do you want to take that on notice, Senator Canavan?

Senator Canavan: I'm happy to take it on notice.

Senator GALLACHER: The FOI says 9 July but they were invited earlier, according to the—

Senator Canavan: It may not have been by email; I can't speculate. But I'll take it on notice.

Senator GALLACHER: All right, and we'll look forward to seeing your establishment in Cairns during our inquiry.

Dr Hardisty: In Townsville, Sir.

Senator GALLACHER: Haven't you got anything in Cairns as well? We could go—

Dr Hardisty: No, we don't. We have something in Darwin though!

Senator Canavan: Warren might be campaigning for that, perhaps.
Dr Hardisty: We do have an office in Darwin as well.

Senator GALLACHER: Townsville's fine; it's not far from Cairns.

Senator McDONALD: I really enjoyed my visit—which hopefully nobody redacted, because I'm quite pleased to tell everybody that I spent time in Townsville at some of the associated facilities but most importantly with AIMS. I was really impressed with all the work that's being done. In particular, I wonder if you would talk about the industry associated, industry-partnered, research that you are doing. I'm going to let you explain it, because it was all the different tubs with the different levels of carbon. It was related to the Great Barrier Reef drilling.

Dr Hardisty: With industry?

Senator McDONALD: I came back and looked at that after everybody else had gone. I stayed on. So if I'm asking too detailed a question—

Dr Hardisty: No, that's fine; I'm happen to talk about that. We work extensively with industry insofar as they have requirements and questions that are unanswered and need a research inquiry of the highest calibre. But only under certain circumstances. We'll only accept external revenue from industry if we can demonstrate and satisfy to ourselves that the work that needs to be done is of a nature that will advance the science.

Senator McDONALD: And a public good?

Dr Hardisty: And the public good. Therefore, we stipulate clearly that all of the work has to be made publicly available. That's the underlying premise. We're working extensively, for instance, on the west coast with people, like Woodside and Santos and other oil companies, to help them understand the marine environment in which they operate so that they can operate in a way that's less damaging. Much of that work has included work on coral reefs. We have some beautiful reefs in the west and the north. It's not just the Great Barrier Reef that we are lucky enough to be blessed with. A lot of that work in the west has looked at long-term records of the health of reefs in the west. In the east we're now embarking on a very similar type of project, where we're looking at the effects of warming waters and other stresses on the reef.

One of the things that is really key of that, and you would have seen it, is the coral cores. We have the world's largest collection of cores. We go to these really old corals—the big bombies, if you ever go snorkelling or scuba diving. They're these big lumps. They look like brains, parietes, and some of them are up to 500 years old. We core down through them and take a slice out of them. We pull it out, and you've got a full record. Some of our cores go back to the 1500s, to Magellan's time. When you put them under ultraviolet light you can see the annual banding. It's like tree rings. Corals grow every season. Through that, we can reconstruct the history of that particular spot and that particular reef because they don't move around; they just stay in one place. We use that to extract information that helps us understand the stresses that reefs have been under, over that 500-year period and to the present day, so last year, the year before and the year before that.

We're using this to help work with a particular new industry partner. I'm not at liberty to say exactly who they are yet because we're just about to announce it. It's a great collaboration and it's one that we're doing very closely with a traditional owner-partner on the Great Barrier Reef to help us understand the history and how we can help protect their reefs going forward.
Senator McDONALD: Thank you. One of the things that I really enjoyed was that it's not just about modelling for you; particularly at that site, you're looking at evidence based science. I read, though, the other day that you have a blue team and red team approach to the research. Would you talk a little bit about that?

Dr Clark: Yes. 'Blue on red' is a concept that was, I think, originally developed by the US military. It's essentially a war-gaming thing. If you think you've got a good defence, it's a way of trying to poke holes in the argument or poke holes in the defence. We're currently in the process of a 'red on blue' exercise right now using some of our best internal scientists, and we brought in some external experts as well. We are looking comprehensively at a part of our science. We have another one that is scheduled to come up next year. It's something that I've implemented since the beginning in my work as CEO, in the last 2½ years. That's how it works. As we go through that, we're going to identify the things that we think we can do better in the future. As I mentioned in my opening statement, that's what science is all about: understanding that we're not perfect; it's about getting better and learning from what we find, learning from things that we thought might have been the right answer and turn out to be not so much the right answer, and gauging, checking, moving and ending up producing better and better science. At the end of the day, it's about continuous improvement, and that's a key part of what we're after.

Senator McDONALD: I think that's particularly important with the Great Barrier Reef work. It's easy to talk about the Great Barrier Reef as though it's one thing.

Dr Clark: Absolutely.

Senator McDONALD: Unless you're close to it, you don't understand how big, how broad and how varied it is, and its different levels of health. With the research gaming, would you consider bringing Dr Peter Ridd in on one of those teams as a robust approach to your science?

Dr Clark: It's interesting because I actually met him two weeks ago and he asked me that exact question.

Senator McDONALD: Did he!

Dr Clark: I'll tell you exactly what I told him. I said, 'Yes, it's possible.' We have to discuss it.

Senator McDONALD: The last thing that we talked about was having more evidence based research available for scientists in this area. What would be, in your opinion, another avenue that would give you additional tools in your research, particularly along the Queensland coast but also other parts around the state? I'm thinking of water-monitoring spaces. Would that be something that is useful?

Dr Clark: I'll interpret the question to mean 'in general'. Is there more instrumentation? Is there more data collection that can be done? The answer is always yes. It's interesting. I was having a conversation with a colleague a couple of days ago and we were talking about our long-term monitoring program on the Great Barrier Reef, which is the longest continuous record that anyone has of monitoring the reef from top to bottom, north to south, inshore to outer reef. The question was something like: can you ever be sure that what you're doing every year is enough to tell you, with any certainty, what's going on in such a big, complex and varied ecosystem? The answer I gave was that we visit
annually about 70 reefs—sometimes a few more; sometimes a few less—but there are hundreds on the GBR, so we're taking a small subset. If we had a bigger budget, we could visit 140 reefs. If we had another boat and more money and more time, we could reach more. But what we try to do is use our understanding of the reef, and the science and the measurements we have, to make sure that the ones we go to and the measurements we take are of the highest value and are as representative as they can be. For instance, we know that parts of the reef behave very similarly. We know Bunker and Capricorn behave in a certain way, and so on. So what we try to do is make sure that we're picking representatives of those key clusters and getting enough spatial—vertical and lateral—sampling of those features so that we can be as sure as we can be, with the resources we have, that we are getting a pretty good picture.

We'd love to go to the Far North more. It's really far away. It's expensive to get there, so in the past few years we've only been there every couple of years. We've started to try and bring new resources to bear to visit the Far North, which was hit badly by the bleaching, every year. We did it in the last go-round in early 2019 and we found some good signs of recovery on some of the reefs that have been hit pretty badly. There are new baby corals growing and stuff like that.

To make a long story short, if the resources are there to add additional streams of information, better data, more data, more places, then it can only ever be good. But the reality of the world is that you can never have enough resources or time to go everywhere all the time.

Senator McDonald: It's everybody's challenge, isn't it?

Dr Hardisty: Yes, absolutely.

Senator McDonald: It's terrific that you mentioned seeing regrowth and the very varied reef health. We're really struggling with tourism in Cairns and Townsville because so many people have been saying that the reef is dead or dying.

Dr Hardisty: Yes, and that's not the case at all.

Senator McDonald: Thank you. It's not the case at all. It's meant that jobs are at threat—the very people who'd be going out and encouraging and seeing more people on the reef. Sorry, is that a statement?

Chair: I don't disagree with you, but it did sound a little like a statement.

Senator McDonald: Would you agree that the reef is not dead?

Dr Hardisty: Absolutely. In fact, this last weekend I was lucky enough to be on Lady Elliot Island. I don't know if anyone has ever been there or if you've ever seen the reef in that area, but it was as good as you'll ever see anywhere. There were turtles and fish and sharks and rays everywhere. It was truly spectacular and really uplifting to be there to see that, especially given what we do. You know why you do what you do, and it's fantastic. There are a lot of places on the reef that are like that. They're spectacular. But there are also places on the reef that have been quite literally obliterated by the 2016 and 2017 bleaching events and are only now starting to come back. Some of them are coming back; some of them are not.

In our 2019 long-term monitoring program report, we gave the Great Barrier Reef a mixed bill of health. That was the headline: 'mixed bill of health'. Frankly, what does frustrate us, as
scientists in our institution, is that we provide very nuanced, detailed information about what's going on in the reef. Yet, and it seems that all you ever hear is either it's all perfect, it's all fine, or it's all dead. Of course neither of those two things are true. The reef is under a lot of stress. Overall the reef has declined over the last decades. It is in decline. There are still some fantastic places. There are still amazing tourist opportunities. We actually need the tourists to keep coming, because we want their attention, we want their focus, we want their money, don't we?

**Senator McDonald:** Yes.

**Dr Hardisty:** That means that it's still something that matters to Australians, whether or not they snorkel or not; there's something in it for them beyond the beauty and the wonder. It's a nuanced thing, and people have to treat it with that level of respect, I believe. It isn't just something so simple that you can just either go, 'It's perfect; it's fine; it's just as good as it's always been,' or 'It's all dead; don't bother.' Neither of those two extremes could be further from the truth. I've gone on a bit, sorry, but you touched a nerve.

**Senator McDonald:** No, no, thank you. I hope you will extend your invitation to all the senators to go and visit you, because it's a very impressive facility.

**Chair:** It's a long way from WA. This is more of a process question from me: is your mandate GBR?

**Dr Hardisty:** No, it's tropical Australia. We are a northern agency. We work from the southern tip of Ningaloo Reef.

**Chair:** That's what I was going to ask.

**Dr Hardisty:** I'm from Perth by the way. I'm Canadian originally, but when I first moved here it was to Perth.

**Chair:** I detected a little accent.

**Dr Hardisty:** We have a facility in Perth and a facility in Darwin. We work all across the Top End, Gulf of Carpentaria, areas up there that are almost virtually unexplored in terms of the marine environment. Our mandate is to learn about this huge unexplored and incredibly wealthy, diverse ecosystem that is up there.

**Chair:** I might have to catch up with your Perth team at some point.

**Dr Hardisty:** Absolutely.

**Chair:** I think that is it for the Australian Institute of Marine Science. We will move on to Geoscience Australia.

**Geoscience Australia**

[17:21]

**Chair:** Dr Johnson, did you wish to make any opening remarks? We are encouraging people to keep them as brief as possible so we can get to questions.

**Dr Johnson:** No, I won't be making an opening statement.

**Chair:** You just went up in all our estimations.

**Senator Gallacher:** Referring to the Industry, Innovation and Science portfolio budget statements 2019-20 with the forward estimates for Geoscience Australia, can you give us an overview of your spending?
Dr Johnson: I'll go through our major programs. There are three major programs, major initiatives that we are partaking in at the moment. One of them is exploring for the future, which is principally about energy, minerals and groundwater resources across northern Australia. That was a measure that commenced in 2016 and will terminate at the end of this financial year. That has had a focus on the whole of northern Australia data acquisition for some data types, particularly airborne types where you have major aerial extent, but also regional projects in specific areas, more particularly in those localised areas for ground water but also for energy resources, petroleum in particular, and minerals as well. That is one major initiative.

Senator GALLACHER: Is there a budget allocation of dollars for that?

Dr Johnson: That was $100.5 million, more or less evenly spread over those four years. There were two major initiatives announced in the 2018 budget. One was positioning for Australia basically. It was two sub-measures—better GPS for regional Australia and better GPS for business. That is a piece that is principally around improving the accuracy of GPS positioning over all of Australia as a free public good. One of those programs, the one about better GPS for regional Australia, is essentially bringing the five to 10 metre current accuracy down to 10 centimetres free of charge across the whole Australian jurisdiction, including our marine jurisdiction. The means by which we'll be doing that, and we'll be building a system shortly to do that, will be by building better analytical capability for processing the signals we get from ground stations and GPS satellites. But importantly, a key differentiator and a first for Australia is we will up-link that correction to a satellite that has a view, if you will, of the entirety of Australia and broadcast a single correction to everyone. You will be able to pick it up on your mobile and have 10 centimetre accuracy. We see that as a key enabler of many businesses, particularly to businesses that would be better enabled by automation. It's going to provide great efficiencies in agriculture; it will allow productivity gains in grazing through things like virtual fencing, understanding where all the livestock are at any given time and, indeed, to a degree controlling where they are at any given time. And there are many other applications: aviation, shipping, autonomous vehicles.

The other component, the better GPS—

Senator GALLACHER: So that had an allocation of?

Dr Johnson: Sorry; I think that was $165 million or $160 million. I can provide that accurately shortly.

Senator GALLACHER: Just before you go to the next stage, does it really matter in regional Australia whether you've got 10 centimetres or 10 metres—just for someone who has listened to this. I mean, you're not going to run into another person in some areas. So can you flesh that out a bit, why it's so critical that you do this?

Dr Johnson: Sure. If your business is growing strawberries and you want to drive your harvester or fertiliser down the same wheel track so that you don't destroy your crop, you want to know very accurately exactly where the rows are and where the wheel ruts are, and you have to be cognisant of the fact that they are seven centimetres further north than they were the previous year. If you want to do that with efficiencies and not relying on human error and have some level of autonomous steering, you need all of those systems in place. That is just one—
Senator GALLACHER: That's a good example, thank you.

Senator Canavan: There is another example, if I could add, that is particular to aviation, which Dr Johnson mentioned before. For airports that do not have a tower at the moment, this technology makes for much safer landings in particular because they can use the GPS network effectively to assist in the landing. It will also benefit other airports. Because it helps to allow landings to occur at lower levels of fog or visibility, it can keep airports open for longer and so our aviation sector, particularly the general aviation sector, is very excited about this rollout.

Senator GALLACHER: So I suppose, as someone who lives on the coast, we wouldn't have experienced this. Most people wouldn't know that this problem existed!

Dr Johnson: If I may, I'll add a third example that considers cargo shipping. Take the port of Port Headland: if your tolerance or your margin of error below the keel as you're heading out to the channel is 10 metres, you're going to be quite conservative in how you load that vessel. If you brought that accuracy down to less than a metre, that's more cargo per journey and that's more exports for Australia.

Senator GALLACHER: I thought they were taking out a million tonnes of iron ore on each tide?

Dr Johnson: They might well be, but they still have to know with some degree of accuracy where the keel is relative to the top of the channel.

Senator GALLACHER: Excellent.

Chair: So we are sending a new signal to your GPS receiver to improve its accuracy?

Dr Johnson: We will be, yes. The benefit—

Chair: Is it effectively adding a fourth satellite? So instead of three, you're using four to make it more accurate, or is it more technical than that?

Dr Johnson: It's more technical, but I can explain it relatively simply. You're gaining the benefit of receiving signals from a great many satellites. Australia is in a unique geographic position where we see satellite constellations of various nations, up to six different constellations, that we can use. We can receive signals from all of their satellites and process them into one single correction, the best available correction. When I say correction, you need to correct for things like cloud cover and a slow signal from one particular satellite such that if you were relying on that one alone you'd have a decreased accuracy as there's too much margin for error. But if you bring in many more satellite signals and process them all together to create one single correction for all of their different margins for error, you can then send that up to one single satellite and broadcast that one best correction across the entire jurisdiction.

Chair: Okay.

Senator GALLACHER: And the final string?

Dr Johnson: The final string was—sorry; a second string to the positioning piece was around better GPS accuracy but within the mobile phone network. That's a question of: if you have higher bandwidth for sending signals, as you do with the mobile phone network, you can process more complex analytics and send a yet more accurate signal out to people who have tapped into what will be an app, essentially, on their mobile phones. You may need to be a
subscriber—we'll see—but that will enable things like autonomous vehicles. You need to know exactly where the side of your vehicle is to within centimetres, not metres, if we are going to go down that route.

The third major initiative that we've been working on is one around satellite observations. We have a program called Digital Earth Australia where we have an archive of about 30 years worth of satellite imagery across all of Australia that essentially, if you view it in time sequence, allows you to track all of the changes in the landscape over that period, so it enables you to see flooding events and where the water was, when it drained, how long it took to evaporate and where it drained really quickly, for example, such that you think you might be in an area that's recharging an aquifer. That's just one example. You can see changes in levels of forestation. You can see urban growth. You can see changes in cropping practices in different farming areas. It's a state-of-the-art tool for natural resource management applications. The work that we did previously was to produce a prototype that enabled us to take that satellite imagery archive—again taking out all of the errors for cloud cover, Australia's movement to the north et cetera—such that if you're looking down through a time sequence of images, you know you're looking at exactly the same piece of Australia down to an accuracy of 25-meter pixels. That's for the archive. We're now also augmenting new data from a European satellite cluster, which is giving us accuracy of 10-metre-square pixels updated every five days. It becomes an evidence base for policy decisions around natural resource management.

Senator GALLACHER: Okay, and that was worth?

Dr Johnson: It's $37 million over four years.

Senator GALLACHER: Thank you for those very interesting explanations of the work you do. Now, can I just go to a short summary of how you work with your state counterparts? How will that last bit of technology work with the Murray-Darling Basin Authority? I would be pleased to know that we're dealing with some floods, but unfortunately we're not.

Dr Johnson: We are collaborating with the Murray-Darling Basin Authority, and they are using the product. It's obviously important to them to know where there is water and when. That is an ongoing collaboration.

To your other question around our relationships with the states, the work of Geoscience Australia is quite broad. Part of it is straight up geological. We work with the geological surveys around the country and the relationships there are very strong. We have an annual meeting, or rather it's a geological working group under the COAG energy and resources council. We meet formally once a year, but we're in regular contact. We work very hard to ensure our programs are complementary, they leverage off one another and they avoid duplication. That has been working very well for at least 15 years, and we work assiduously to make sure it stays that way.

When we work across other disciplines, if you like, we have to work with different state based organisations. For example, in our groundwater work we're dealing with water authorities or sometimes the environmental authority in any given state. It gets a bit more complex, but we still have good relationships. And if any of my colleagues want to add to that, I'll invite them to.
Senator GALLACHER: You meet formally once a year, you decide what the program is, you don't duplicate and you've been doing it for 15 years.

Dr Johnson: We've been doing it for much longer, but the dramatic improvement is probably over that time.

Senator GALLACHER: What about the National Mineral Exploration Strategy endorsed by the COAG Energy Council in 2017. Does that change the way you operate at all?

Dr Johnson: It has given a sharper focus to some of the things that we were going to be doing anyway, but the real power of it was working with the states to get a jointly agreed position on what the priorities were, and many of those priorities were actually through extensive consultation with industry as well. To get the COAG's imprimatur to proceed with that means that we're full steam ahead.

Senator GALLACHER: Very good.

Senator Canavan: Geoscience Australia has also been working very closely with the state and territory governments that are relevant for the Exploring for the Future program. If I'm right, that includes Queensland, the Northern Territory, Western Australia and South Australia.

Dr Johnson: That's correct.

Senator Canavan: That program is funding some more innovative ways of searching for mineral resources using aeromagnetic, seismic testing and in some cases world-first frontier type techniques. Geoscience Australia has been working with state and territory governments to coordinate that process and, as Dr Johnson was saying, leverage off what they're already doing.

Dr Johnson: And we're seeing positive impacts from that program even within four years insofar as we are attracting exploration investment interest from international companies coming back to Australia to explore here because they see the potential for resource discoveries in Australia.

Senator GALLACHER: I note in the budget document that departmental expenditure for the National Water Infrastructure Package is increasing from $1 million in 2019-20 to $2.9 million in 2020-21. What is Geoscience Australia's role in that?

Dr Johnson: If we're talking about the same program then, yes, we do. It's principally around the Great Artesian Basin and understanding what the available resource is in a sustainable manner around the Great Artesian Basin.

Senator GALLACHER: Have we accurately measured that yet?

Dr Johnson: I couldn't apply the word 'accurate' to it, but we have some sense of it. The issue with the Great Artesian Basin is that much of that water is ancient insofar as it entered the ground thousands and sometimes up to one million years ago. If we extract it faster than
it's recharged then it's not going to be a sustainable resource. Understanding that is one of the key complexities that need to be addressed.

Senator GALLACHER: If you're taking out water that is 1,000 years old, how do you measure the water that is going in? Did it fall 50 years ago in the New Guinea Highlands or somewhere?

Dr Johnson: It might have fallen a great many kilometres away, that's a correct statement. There are ways you can actually determine it. You can essentially date the groundwater. You can measure how long it has had a resonance time in the ground. We don't do that directly, but we sometimes work with labs that will do that work.

Senator GALLACHER: The National resources statement talks about opening up new industries and resource regions. It states:

- Investigating expanding the scope of Geoscience Australia's Exploring for the Future program and extending it for four years.

Is that budgeted for? Are you doing that?

Senator Canavan: That's really a question for me. It is under consideration at the moment. It was a topic of discussion at the last COAG resources council meeting. I have asked states and territories to see what they can do to contribute to this scheme, keeping in mind that the investment the Commonwealth is making here is really to try to de-risk and increase the information base around resources that are owned by the state or territory governments. We think it's an important national initiative. I have asked for any support that they can provide. We're considering what the government can do beyond the ending of the funding for the current round of Exploring for the Future.

Senator GALLACHER: So it's work in progress? You haven't actually—

Senator Canavan: Yes, it's part of the budget process that we will work through.

Senator GALLACHER: So you couldn't attribute any success or any—

Senator Canavan: The current program, as Dr Johnson said, is a $100 million program. It's in its last financial year of rollout. There has been lots of initial success, particularly in the South Nicholson Basin, that I'm aware of. I think there has been a more recent finding in Western Australia. Dr Johnson might be able to add to that. It has attracted a lot of interest from commercial companies. In fact, I know that Geoscience Australia has provided for a situation where companies can add to what they're doing and piggyback off some of the exploring they do so that they get their exploration done at a cheaper cost. That's leading to some good finds. Obviously, some of this will take time to lead to an actual mine or activity, but we know from experience the significant pay-off that this type of work can have.

Dr Johnson: I would like to add to that. There are two waves of pay-off. Obviously the long game, the main game, is the new discovery and the projects and regional jobs that ensue from that. But prior to that, when we initially have success in attracting explorers, they spend their exploration dollars in Australia. That too creates jobs albeit at a lower level. A really good example is running seismic in the South Nicholson Basin, which the minister mentioned, which is more or less on the border of Queensland and the Northern Territory. We spent about $5 million there two or three years ago, and an exploration program commitment from a major petroleum company announced just a couple of weeks ago is worth $65 million. That is good leverage, and that is one example.
Senator GALLACHER: I have three questions going to your annual report. Your 2017-18 annual report states that the delivery of the final report for the China-Australia geological storage of CO2 project has been extended to December 2018. Has it now been delivered?

Dr Heap: Yes, all of those outcomes for that program had been delivered.

Senator GALLACHER: Was it successful?

Dr Heap: Yes. It has provided us new information about bringing technology into Australia about how we can geosequester CO2 in our own environments. It has helped us leapfrog in that regard. It is also seen as one of the best science collaborations between Australia and China; it is held up widely in China as a way of doing business with scientific research with Australia.

Senator GALLACHER: Your 2017-18 report refers to Geoscience Australia's role in delivering investment promotions at key international resource seminars and trade conventions. It mentions China, Korea, Japan and India in 2017 and Canada in 2018. Have there been any further promotional events since those referred to in the 2017-18 report? Is that something you do every year?

Dr Heap: Yes. That's an annual investment attraction program that we have to those countries. We are just finalising another tour to Japan, China and Korea around minerals and in a few weeks time we will be going back to North Asia for petroleum investment attraction.

Senator GALLACHER: Can you demonstrate how successful these promotional events are in driving investment in Australia? Do you track the tour and what happens after it?

Dr Heap: It's difficult to track investment to one trip. But, over time, what we are seeing is more interest in a wider variety of mineral and petroleum projects in Australia. A lot of it is also about maintaining the relationship and showing that you're committed to seeking investment from those countries. Certainly when we go there we are welcomed with warm greetings; and we also make sure that they know we are still there looking after them and asking them to invest in the country. As a result of that, what we are seeing is further questions about what other activities they may get involved in in Australia. Of course, particularly in the mineral side, we do all this with our state and territory counterparts; and they have reported to us that they are getting more solid requests for information about specific projects in their jurisdictions, which is a very beneficial outcome.

Senator GALLACHER: The National Resources Statement commits to the finalisation of an MOU between Geoscience Australia and the United States Geological Survey on developing vertical minerals. Has that been finalised?

Dr Johnson: We haven't signed the agreement yet but it will be signed before the year is out. So we are ready to proceed without agreement.

Senator PATRICK: I'm going to ask some questions, and if you need to put these on notice then please do so. I'll declare, they're in support of an inquiry this committee is also running, so this is just to get some early information. What does Geoscience Australia estimate to be the extent of unknown and undiscovered gas and oil potential both on shore and off shore?

Dr Johnson: My colleague Dr Heap can make a start on that.

Dr Heap: Just referring to oil?
Senator PATRICK: Oil and gas?

Dr Heap: At the moment, our understanding of what we think the gas reserves are for the total for Australia is about 114 trillion cubic feet. That's been discovered—proven. If you add in the ones that are known about, but not commercial at the moment, you're looking at 143 trillion cubic feet.

Senator PATRICK: In addition to the 114 trillion cubic feet?

Dr Heap: Yes.

CHAIR: Do you have error bars on those? Is it proven reserves plus or minus two per cent and unproven reserves plus or minus 20 per cent?

Dr Heap: At the moment we don't put error bars on them. It's a deterministic process, but we're moving towards a more probabilistic process where we'll be using ranges and then we'll put the error bars on them.

Senator PATRICK: Known unknowns and known knowns and all that sort of stuff?

Dr Heap: Yes.

Senator PATRICK: What's the estimated value of Australia's unexploited oil and gas reserves?

Dr Heap: I'd have to take that on notice. We don't calculate the value at this point. I can tell you what the total is.

Senator PATRICK: And obviously there'd have to be a baseline.

CHAIR: Spot prices.

Dr Heap: And obviously it depends on the commodity price.

Senator PATRICK: I'll let you decide on what it is, and then you'll just let us know.

Senator Canavan: Just so we're clear, you're asking for a value in revenue terms.

Senator PATRICK: Yes.

Senator Canavan: Obviously, we won't be able to do a net present value or cost based—

Senator PATRICK: Sure. What are the areas considered most likely to result in significant future oil and gas resource extraction?

Dr Heap: Partly what we're doing in exploring for the future is trying to understand that better, but our current knowledge suggests that off shore the Great Australian Bight would be the one we would rank as the top from a geological prospective. Off shore you're looking Browse Basin and, technically, deeper in the sections. The upper part of the section has been exploited nicely by the petroleum companies, and now they are finding new, recent discoveries in the lower parts of the sections that are also very prospective. We would concur with that. I think off shore of Northern Australia is a good place to look. On shore, Canning Basin would be one that would be very prospective in our view, or one of the top ones. There's the Beetaloo and also, in Queensland, the Surat and Bowen basins.

Senator PATRICK: What's the lifetime of these areas? I guess each one attracts a different lifetime?

Dr Heap: That's correct. It's very difficult to know what the lifetime is, because new technologies come on board where you find new deposits and new resources. A lot of its
technology constrained. Others are information constrained. When they do further exploration they find new information—for instance, the example I gave of deeper in the section was based on new information that was brought to bear. That has opened up new frontiers in that regard. It's very difficult to know, but you're talking decades; you're not talking years.

**Senator PATRICK:** Are you undertaking any analysis as to whether a field would potentially become commercially unviable on account of a shift towards renewables?

**Dr Heap:** No, we don't. We don't look at that. We look at it from a basic fuel prospectivity perspective.

**Senator Canavan:** From the resource potential, not an economic value—

**Senator PATRICK:** Sure. When we talk about 'value', I'm talking about the value of the reserve; I'm not talking about tax or PRRT or anything else we get from the companies, because they don't give us very much. It seems we tend to give it away. That's a comment; that's not a question. What is GA doing to assist oil and gas exploration in Australia?

**Dr Heap:** As Dr Johnson and the minister mentioned, we have a very large program at the moment called Exploring for the Future, which is designed to look at those frontier regions where typically the oil and gas companies won't go to do exploration. The whole point of the program is to get them to move into areas where they traditionally won't go because it's too high risk.

It's about opening up the search base across Australia, and to do that we're collecting a variety of data to look at the Earth, whether it be through x-ray-type technologies or sampling directly the Earth's surface or subsurface. We're bringing that together in our databases and analysing that data through our scientific knowledge with our colleagues in the states and territories on shore to better understand the resource potential.

**Senator PATRICK:** What's the cost of that program? How much has been done by third parties and how much has been done by GA?

**Dr Heap:** The total cost of the program is $100.5 million over four years. We've currently spent $76.3 million.

**Dr Johnson:** The petroleum component would be a lesser number. It'd be around $30 million.

**Dr Heap:** It's just over $30 million at about $35 million for petroleum. So we spent $76.3 million. It's leveraged another $20.1 million out of the states and territories to help enhance what we're doing. Sorry; what's the second part of your question?

**Senator PATRICK:** How much is contracted out to third parties—so GA internal versus external.

**Dr Heap:** Currently, we've awarded 239 contracts under the program, and they have a maximum value of $65.8 million.

**Senator PATRICK:** So that's actually quite a large percentage of it? Okay. This is to you, Minister. Australian taxpayers, of course, might accept that the Commonwealth might need to bear some risk here. I'm not critical in any way, shape or form, but does the Commonwealth get to take a position in respect of future oil and gas revenue? Is that a mechanism by which we could—
Senator Canavan: You're asking if we would somehow be able to market or sell the information we collect from this program?

Senator PATRICK: In some ways you de-risk the program.

Senator Canavan: Not in this program. It is a purely a public-good program, so all of the information collected through Exploring for the Future is made publicly available. The idea is to—sorry for the jargon—de-risk these types of—

Senator PATRICK: I understand that.

Senator Canavan: So, obviously, the sort of exploration we're doing is high level. There are still risks post any shows or fines in this program. It's not a certainty that there will be a commercial resource, but that extra information can help attract further investments. That's why we provide it as a pure public good, as do the other geological surveys. In terms of the Commonwealth, keep in mind this program is purely on shore, so none of the finds that we make here will provide revenue to the Commonwealth. As I mentioned earlier, they will actually benefit the states and territories, but we still think it's of national importance given the importance of building up our resources centre in our economy. I should clarify that none of the revenue from the royalty or resources—

Senator PATRICK: I understand what's going on with the difference between on shore and off shore. That's the reason why you mentioned x-ray and not seismic.

Dr Heap: We do do seismic on shore. It's the same technique using different equipment. But, yes, it's basically the same thing. I just used x-ray as a—

Senator PATRICK: You have a kind of thing that tracks vibration.

Dr Heap: Yes.

CHAIR: How long have we been using seismic?

Senator Canavan: On shore, you mean?

CHAIR: On shore and off shore.

Dr Heap: It is probably 60 years.

Senator PATRICK: What's the value of this precompetitive and other information that you're providing? Do you put a value on that?

Dr Heap: In terms of the resource?

Senator PATRICK: The program that you're doing.

Dr Heap: Do you mean return on investment?

Senator PATRICK: It clearly has a value in that you've done some de-risking.

Dr Heap: So the results and the outcomes.

Senator PATRICK: Do you place it as a value that you book against the work you've done and then later recover in some way?

Dr Heap: I guess the best way to answer that is to say that, as Dr Johnson mentioned, we've had some very good results with new companies taking up tenements as a result of the work that we're doing that they wouldn't have taken up had the work not been done. At the moment, we've got six minerals companies that have taken up new ground. Apart from the work program commitments that they've made, as Dr Johnson mentioned, we've done a quick
calculation and estimated what it might look like if they actually found what they were looking for in that area. If they find the mines and what they're looking for, the return on that is estimated to be about $800 million. So I think the return on investment—

Senator PATRICK: How does the return come? By way of royalty?

Dr Heap: Royalties and taxes, yes.

Senator PATRICK: How much funding has GA received to carry out this work?

Dr Heap: That's the $105 million.

Senator PATRICK: This might be a loaded question: is it sufficient for the task? You always want more money. Are you on track to achieve the objectives, noting the current spend and the total allocated budget?

Dr Heap: Yes, we've designed the program to meet the targets.

Senator PATRICK: How much of this money is recovered by way of sale of goods and services.

Dr Heap: We don't charge. It's all publicly available information, and we do not cost-recover for the delivery of the information. There is sometimes a fee for cost of transfer: if we're putting it onto a hard drive or something, there's a moderate cost to do that.

Senator PATRICK: I think you might have asked some questions while I was out of the room in relation to state government splits, in terms of splitting money, so I'll look to the Hansard for that. What do you estimate the impact on the rate of resource exploration would be if this information were not provided free of charge?

Dr Heap: Going back to the question about the investment attraction, one of the key comments we keep getting about why we have a competitive advantage in Australia is that it is because we make this data freely available, so it keeps us competitive in a global sense. So the global resources industry look to us and think Australia's a fantastic model because we can get access to this freely available data to make investment decisions that are global. I don't think we would get that investment as much if we didn't make it available, because we've seen overseas that, where countries decide to charge for the data, there's a drop off in the exploration. I can't put an actual number on it because I don't have the details, but there's definitely a reduction in exploration as a result of changed practices.

Senator PATRICK: I would have thought our very low recovery of tax for the Australian public would have been a key incentive for some of these multinationals, but again that's a comment. Is the information provided by GA consistent with the information and services provided for resource extraction in other jurisdictions—for example, in the US or by Natural Resources Canada? Do you have an international standard in the way you produce this data?

Dr Heap: Yes. Pretty much all the data we collect we collect to international standards, because we obviously want to be comparable to our competitors overseas, but we learn from what they're doing as well. If we can access their data as well as our data easily, that makes that science exchange and also the complementarity a much quicker process.

Senator PATRICK: These might be in some sense subjective answers: for the Exploring for the Future program that you talked about before, how much of an acceleration in exploration by industry have you observed, in terms of results of that program thus far?
Dr Heap: We have seen uptake of tenements in high-value propositions in a limited number of cases. I can't give you just how many more tenements have been taken up in those areas off the top of my head.

Senator PATRICK: On notice?

Dr Heap: We could take that on notice.

Senator PATRICK: Thank you. Again, how do you calculate the impact of the program's information activities on subsequent resource exploration?

Dr Heap: At first blush we would calibrate it against the work program commitments of companies that have taken up ground on the areas that we have worked and derisked, and then subsequently we'd look at the impact of their exploration and whether a discovery was made. We have many case studies over the years, not all from within this Exploring for the Future program, of very high factors of leverage. Indeed, the Western Australian state government—the WA Treasury—did an analysis about five years ago of return on investment for mineral exploration for dollars spent on precompetitive, and the factor they came up with was a 23 to one return.

Senator PATRICK: Thank you. I want to slip sideways to a couple of quick questions on the Timor Sea. Minister, is there a safe space I can go to somewhere?

Senator Canavan: Maybe just exactly outline the question, because it might not be for Geoscience Australia.

Senator PATRICK: I understand. It might be better with NOPTA or NOPSEMA; I accept that. Are you familiar with the Laminaria field?

Dr Johnson: No.

Senator PATRICK: So you have no expertise there. I guess we will wait for NOPTA or—

Senator Canavan: I'm aware of the Laminaria field, but—

Senator PATRICK: Obviously during the treaty negotiations there's been an adjustment in where the boundary is, and I wish to understand whether or not some of the Laminaria field is now on the East Timor, or Timor Leste, side.

Senator Canavan: I understand the issue. If it's okay with you, that would probably be best under program 2.4 this evening.

Senator PATRICK: All right, and that will please the chair too.

CHAIR: No end! Senator McDonald, I understand you have one question.

Senator MCDONALD: Yes. I am interested in northern Australia and the exploration program up there, particularly the Mount Isa North West Minerals Province. Can you tell me about the work that you're doing in that space and what you're finding?

Dr Johnson: I'll lead off. In that area, we did some early work that was a major airborne survey whereby, through flying an instrument across the land back and forth, back and forth at a uniform spacing, we were measuring the electrical conductivity of the subsurface. Some mineral deposits that are principally made up of metal sulphides are electrically conductive. So you get a sense of where there are little sniffs of electrical conductivity. You also, by contrast, see where areas are highly electrically resistive. One of the key things that's
electrically resistive is fresh water—non-saline water—so it gives you an insight into where some water resources might be. The spacing at which we flew that was quite broad, so it's only a real reconnaissance-type look. However, it was sufficient to generate interest—sorry, one of the key things it also gives you an insight into is how thick the young cover is—the sandy cover that conceals the rocks of interest that are much older, that may well be mineralised. In understanding that, you have a sense of what areas might be economical to mine if a discovery were made. It's on the back of that sort of work that we attracted a major international explorer back into Australia who hadn't explored here for over a decade. They wanted to look along the extension south from Mount Isa, where, in various geophysical maps, you can see the same belt of rocks continuing under that sandy cover. It was enough to pique their interest, and they took up a big smack of tenements. I'm not sure what the value of their work program is, but Dr Heap may know.

Dr Heap: I don't have the details, sorry.

Dr Johnson: Okay. I previously mentioned a bit further north and perhaps a bit further west—the South Nicholson Basin, where we ran a lot of seismic and have attracted significant interest in petroleum exploration, with a $60 million program commitment just announced two weeks ago.

Senator McDonnell: Terrific, thank you.

Chair: I was keen to ask about the Canning Basin, but in the interests of time I'm going to put that to one side. We're very keen, Minister, as I think you would appreciate, to keep rolling through the program. Geoscience Australia goes with our thanks. We will move straight to ANSTO and we will try to complete that before the dinner break.

Senator Canavan: While we are switching over, Chair, I just want to clarify some facts put to the committee earlier to do with the Space Agency program, in particular, to respond to the shadow minister for science, Brendan O'Connor, who has put a media release out. We want to point out that we think there are a few errors in that release. Mr O'Connor claimed that $15 million is being spent over the forward estimates, but, to be clear, the officials let the committee know earlier today that $50 million, not $15 million—it might have been a miscommunication—of the $150 million space funding will be spent over the forward estimates. The other $100 million is in the final two years of the program.

There was also a claim from Mr O'Connor that officials did not know that the funding would be administered. Officials clearly outlined the three elements of the funding that form the package, but we are consulting further with NASA on the details of how it will be specifically rolled out, as you would expect. Finally, Mr O'Connor made some reference to the $150 million investment potentially being a loan, not a grant. I want to put on the record that that is definitely not the case.

Chair: Thank you, Minister, for that clarification.

Australian Nuclear Science and Technology Organisation

[18:05]

Chair: I welcome representatives from ANSTO. We are going to try to complete this relatively quickly. We may push out the dinner break slightly to get through this before the dinner break. In the interests of time, Dr Paterson, do you have an opening statement?
Dr Paterson: I have no opening statement.

CHAIR: Excellent; that's the correct answer! In that case, we will go straight to questions. I'm going to lead off. There's been a lot of information in the media about the accident—I think it's correct to characterise it as an accident—at ANSTO which led to a loss of availability of molybdenum-99 in particular, and perhaps other nuclear medicine isotopes. Where are we at in addressing that issue, and what is the current state of availability of nuclear medicine products in Australia?

Dr Paterson: The situation that happened on 6 September was a mechanical failure of a valve in our ANSTO nuclear medicine facility. That failure had no safety implications and it wasn't caused by any missed action by the staff. It seems to have been an early run-in mechanical failure related to the fabrication of that valve.

CHAIR: Which was newly installed equipment?

Dr Paterson: It's a new facility, and it's in its run-in phase. We often talk about the bathtub; at the beginning of the life of a facility, you get an increased number of incidents because you get run-in failures. You then get the bottom of the bathtub where things operate reliably for long periods of time, and then you get the end of the bathtub where things start to fail because of age. The early information we have, which is not complete at this point, is that it is a mechanical defect. We are in the process of returning to service. You will appreciate that the valve is not a small valve. The table in front of you is about the size of the valve enclosure. The valve itself is quite large, and the mechanics that operate it have to be shielded because it's a radioactive environment. We have taken the first steps to get to the valve. It has in fact now been removed and is being studied. We do have a replacement available, and the team is now looking at the finalisation of the replacement strategy. It's moved from a situation of weeks to days, so we are well on the recovery road.

CHAIR: Sorry to interrupt; when you say days, where does that put you back in moving the facility into production?

Dr Paterson: In terms of this particular incident, it is not a safety related incident. As soon as we have established the replacement valve, we will be able to re-establish the facility for production. I hate to put pins into calendars, but, as I indicated, it's no longer weeks but days.

CHAIR: Sorry, to be clear: that is for production, not just the installation of the valve?

Dr Paterson: For production, yes. The second part of your question was: what impact does this have? In the period from 6 September to the end of September, it was challenging but we were able to bring in supplies from other countries, particularly South Africa. Those supplies were sufficient to cover the bulk of what I would call the emergency and immediate cases that are done; for nuclear medicine diagnosis, you have emergency practice, case management practice, studies and research. We were able to pretty much cover the emergency environment in September, and we have been very close to full supply during the course of October—that is, all of the classes of utilisation by importation from South Africa.

In addition, the TGA was extremely helpful in getting priority assessment of potential imports from both the Netherlands and Belgium. They gave expedited permission for the use of material from there, which is also available. I must give credit to the team who worked on that supply issue. It is a complicated issue because, globally, there is a shortage. For us to be able to get this level of coverage while there is a global shortage is exceptional, and I
congratulate the team that has been working on that. The flexibility of our customers and partners, and the responsiveness of the Department of Health and the TGA, has really helped.

CHAIR: The safety of your staff—you did mention it.

Dr Paterson: There are no safety implications of this incident. Everybody has worked safely. We do pay very careful attention to the situations where we have to develop remediation plans. We have a project manager function, but we also have a safety and operations function. Those two work in concert, and safety always has priority.

CHAIR: I'm happy to leave it there. My colleagues may have further questions on that.

Senator McALLISTER: I actually want to go to a different matter. I understand that there have been some issues associated with importing a product, the acronym for which is MAA; I believe that stands for macroaggregated albumin. The assertion is that ANSTO has prevented a private radiopharmacy group from conducting its longstanding practice of importing MAA from Hungary. Is that a correct description of your role?

Dr Paterson: I do not think that is a correct description of our role. MAA is used for lung perfusion studies; that is the major utilisation. For a long time it has been supplied under emergency arrangements under the TGA—this is an unusual situation—and ANSTO has worked with the pre-eminent international supplier—

Senator McALLISTER: This is DraxImage?

Dr Paterson: This is DraxImage. They wanted to seek a marketing authorisation which would mean the end of its supply arrangement and an arrangement which would be a more normal market arrangement.

Senator McALLISTER: I see. Are those two things mutually exclusive? Was it not possible for DraxImage to obtain an ordinary market access arrangement if the emergency arrangement stayed in place?

Dr Paterson: The rules of engagement are set by the TGA. My understanding, which is not a detailed understanding, is that when a marketing authorisation fee has been paid, and it's been established that the product substantially conforms to the requirements, that means that that becomes the basis of supply. And any—

Senator McALLISTER: Sorry, I'm just conscious of the time. I am interested in your answers, and you are being very helpful. Does ANSTO have a role in the marketing approval?

Dr Paterson: No, we don't. The marketing authorisation is sought by the company that is going to bring the material in. They can do that either through ANSTO or any other channel they choose to utilise. The discussions were initiated with ANSTO and completed with ANSTO around April this year. The timing of the announcement was in the hands of the TGA. It did create consternation among nuclear medicine practitioners in the market. We have had extensive discussions with them, and they have brought to our attention a number of features of this market where there are actually, in a number of these kits, as they are called, ongoing shortages. While it did create some sense of disruption, at the same time it's opened up a risk for Australian health. Across the range of kits that we need in order to satisfactorily perform diagnosis using technetium-99m, there are particular kits that seem to have ongoing variations and supply shortages. As a result of that, I've asked my team to look more deeply into the full range of supply of kits that would be beneficial to Australian health and to work
with all stakeholders in a coherent, consistent way to try to improve that over time. It is important that we do recognise that long-term emergency supply arrangements are not optimal in a market and that restoration of normal market actions is the way to go.

Senator McALLISTER: Sure. I don't assert that I have the full picture about this particular market or product, or indeed the health applications; I fully concede that. But the advice that I have is that the consequence of the particular model that's been adopted with DraxImage, in which ANSTO seems to play some role in distribution, is that a product which previously was relatively affordable—particularly for regional health practitioners—is now $85 per patient, which I think comes about because of questions of scale in a regional clinical environment. Notwithstanding your assertion that a long-term secure and stable supply would be a good thing, in the short term it seems to have produced a very significant disruption.

Dr Paterson: There has been a short-term effect, and I believe that the discussions that we've had with both the regional and the rural practices and their representatives, as well as the people in the urban and clinical settings, has given us an insight into a wider range of applications, all of which have different reimbursement characteristics under the Department of Health. So it's quite a complicated picture, but I am quite happy to take aspects of it on notice and provide you with more detailed information, because it isn't one single indication; it's a multiplicity of indications, all of which have different reimbursement characteristics. In the case of this particular kit, in some cases it's sent directly to the clinics; in other cases, it's supplied as unit doses through an intermediary. So it's quite a complex marketplace, and I don't want to oversimplify it in a way that's not helpful.

Senator McALLISTER: I appreciate that. You have written to one of your stakeholders indicating that you're undertaking a pricing options review that will aim to provide a more flexible pricing structure that addresses and acknowledges the concerns of the profession, which is consistent with what you've told me this evening. When will that review be completed?

Dr Paterson: That process is nearly complete. I haven't had a review in the last immediate period, but it's my expectation that well before the beginning of December we'll have a position that we can put clearly to the market.

Senator McALLISTER: What is the governance arrangement about this position? Who will sign off on it? Is it exclusively your responsibility, or does the health minister or Minister Andrews have a role?

Dr Paterson: We believe that the correct way to do this is to do this as ANSTO, as an institution, under the guidance of the board. We have briefed the minister's office and we have briefed the Department of Health, and we have in fact had discussions with them about this. The Department of Health owns the reimbursement and recovery-of-cost aspect, and we are involved, as you've indicated, in the supply chain.

Senator McALLISTER: I see. But you must be critically involved in some way, because you're conducting the review. I'm struggling to understand the locus of responsibility for this program. It does seem as though it is with you.

Dr Paterson: The locus of the pricing issue is with ANSTO.

Senator McALLISTER: Is that because of the terms of the arrangement that you reached with DraxImage?
Dr Paterson: That is correct.

Senator McALLISTER: So you would need to renegotiate your relationship with DraxImage if you were to seek to meet the needs of some of these stakeholders.

Dr Paterson: I wouldn't like to comment on our strategy in any detail.

Senator McALLISTER: I don't quite know how to proceed, because it is a complex matter but it's an important one. I wonder if there might be some way, Ms Kelly, that we could arrange for those members of the opposition party that are very interested in this issue to have some kind of meeting. I don't think it's particularly political, but it is a problem of acute interest.

Senator Canavan: We'll see what we can do, Senator. I think that could probably be arranged. I just make the point that this is ANSTO and these issues fall under Minister Andrews' responsibility, so I'll liaise with her, but I imagine something could be done.

CHAIR: I would be more than happy to run it through the committee, if that would be an option.

Senator Canavan: I'll come back to you.

Senator McALLISTER: Thank you, Chair. That's a very sensible suggestion. That's all I have.

Senator McMAHON: Could you outline which of the gen IV modular reactors the Generation IV International Forum are researching and what involvement ANSTO has had?

Dr Paterson: There are six reactors involved, and I'll provide a written response in regard to that because it can be quite detailed. The two reactors that we have prioritised from an ANSTO perspective are the high-temperature reactor and the molten salt reactor. We've chosen the high-temperature reactor because, obviously, it goes to the top of the temperature range at which reactors work and the molten salt reactor because it has the highest flux of neutrons and other parts of the nucleus. By choosing those two designs, we envelope the materials engineering of all the other designs. That was the reason for our strategy.

Senator McMAHON: Does ANSTO currently have a view on which of those two, the high-temp and the molten salt, looks the most promising?

Dr Paterson: We have a general view that, by enveloping the full scope—and with the fact that we're not choosing any reactors or anticipating any nuclear power programs—we therefore provide the greatest strategic intelligence for the Australian future reflection on which designs would be the most appropriate.

Senator McMAHON: Thank you.
Senator SINODINOS: How are you going with the development of Lucas Heights, in terms of the science and technology incubator and other stuff?

Dr Paterson: Thank you, Senator. It's good to see you. I've got a lot of good news about what has happened. We are now able to host the local southern Sydney cluster of robotics activities. They've joined together in quite a strategic way to look at advancing the next generation of robotics technology with small start-ups and companies that are interested in that domain. We are looking at the application of robotics in particular nuclear settings. That's a very recent development. It has been a long conversation but it has become more intensive. In fact, early next week we will have our next meeting with the Greater Sydney Commission, who are looking at the so-called place part of the strategy, which is how the physical arrangements of the precinct can enhance the activities and accelerate the activities that would lead to industrial development and new applications of research. My great dream is that a new generation of PhD students who are closely allied with innovation and industry would be one of the key outcomes of this process. We're very excited. We continue to be excited about the nuclear medicine opportunities. Then there are also opportunities in quite niche areas like cybersecurity, which is so important for nuclear facilities and specialised facilities in all sorts of industries. Being on top of all of that stuff is really important. The team is motivated and the process continues with high energy.

Senator SINODINOS: Very good.

CHAIR: Thank you, Dr Paterson. I know you've hosted groups from parliament to your facilities in the past. Considering the issues Senator McAllister raised, I wonder whether it might be worthwhile for us to think about doing that. We might talk about that and get the secretariat to contact you offline.

Dr Paterson: Happily. We have recently had a series of visits—around the nuclear energy and uranium inquiries, for example—so we are very happy to host those, in consultation with the department.

CHAIR: Great. Thank you very much for your time. Go with our thanks, and safe travels.

Dr Paterson: I appreciate it. Thank you very much indeed.

CHAIR: We will now pause for a break.

Proceedings suspended from 18:23 to 19:25

Commonwealth Scientific and Industrial Research Organisation

CHAIR: We will resume this hearing of the Economics Legislation Committees estimates. We currently have before us the Commonwealth Scientific and Industrial Research Organisation. Dr Marshall, did you wish to make any opening remarks? We're encouraging people to keep them very short if they do.

Dr Marshall: No thank you, Chair.

CHAIR: Excellent. In that case, we'll go straight to questions.

Senator Pratt: I have a fact sheet here that I think might have been a staff circular for the CSIRO. I might take the opportunity to table that, if I may?

CHAIR: Let's have a look at it and we'll make a decision.

Senator Pratt: Yes.
CHAIR: Actually, you have reminded me, thank you, Senator Pratt, that we neglected to table the Australian Institute of Marine Science's opening statement. With no objections, I do that now.

Senator PRATT: I need the witnesses to get a copy of this.

CHAIR: We'll make some copies.

Senator PRATT: I'm referring to the attached CSIRO document on ASL caps. Dr Marshall, is this document based on any guidance provided by the Department of Finance, what was that guidance and was any of that guidance in writing? You'll have to see the document, of course! The context of it is the ASL offset rule to allow the agency to employ additional staff to perform externally funded or internally funded work. Have you sought an exemption from that rule?

Dr Marshall: We haven't yet sought a formal exemption for that rule, but of course we've been discussing it with the Department of Finance to get advice.

Senator PRATT: How long have you been discussing those issues with the Department of Finance? What's the process that you're going through to seek that exemption?

Dr Marshall: The ASL cap for CSIRO is quite new. Let's face it, CSIRO has been shrinking for a couple of decades so generally it hasn't been an issue for us. But we've actually grown over the last four years, and this year the ASL cap has become an issue, so we've been getting advice from the Department of Finance to understand whether we're applying it correctly and how we might better manage it in the future.

CHAIR: I assume this is printed off the CSIRO website?

Senator PRATT: It was a staff circular. Maybe Dr Marshall or someone else from CSIRO might be able to confirm that that's the case.

CHAIR: But I assume there is no objection to this being tabled?

Senator PRATT: It would be good if CSIRO could let us know that it's the right document. I'll be happy to hand it up.

CHAIR: Can you verify—

Ms Zielke: The document does look familiar. We provided some internal information to staff in relation to the staffing levels. And, yes, we did utilise information that was available across the Commonwealth in relation to putting those documents together. In relation to your question about exemptions, the process is to actually put together a proposal and apply to the Minister for Finance through our own minister in that regard. But also the ASL cap is managed at the portfolio level. The estimate is a portfolio-level arrangement. So, to date we've been managing within the portfolio arrangement and giving consideration to whether we should actually apply for an exemption going forward.

Senator PRATT: What is the ASL cap imposed on CSIRO currently?

Ms Zielke: Our estimate for 2019-20 is 5,193.

Senator PRATT: So, you haven't decided whether you will make an application to become exempt from the cap?
Ms Zielke: There are arrangements under which you can apply for exemptions—certain arrangements. As I said, to date our ASL estimate has been managed within the portfolio arrangements, so there hasn't been a need for us to apply for an estimate.

Senator PRATT: How many of your staff are currently externally funded?

Ms Zielke: It's more about the way in which our appropriation works, and our revenue. Approximately 60 per cent of our funding comes from the Commonwealth as appropriation, and we raise about 40 per cent revenue from industry and other agencies and other organisations.

Dr Marshall: It's a little over $500 million of external revenue.

Senator PRATT: On that basis, I would expect the cap to apply to only 60 per cent of your staff. Why is it the case that the cap affects you as a whole?

Dr Marshall: The ASL cap applies whole-of-government, and I believe down to portfolio level, and then it's managed within each portfolio. But CSIRO's purpose, of course, isn't to generate external revenue—

Senator PRATT: No, it's to fulfil your core business—

Dr Marshall: It's to the national benefit.

Senator PRATT: But if you were to triple your external revenue and your external revenue were to outstrip your government revenue, you would still have this absurd cap on you currently. Can you explain the policy rationale for that, Senator Canavan?

Senator Canavan: I think this has been covered in other estimates hearings. It's a cap that's applied through the budget process, so not one for this portfolio. Obviously we adhere to it, but—

Senator PRATT: But essentially you would eventually cap the capacity of government agencies to bring in external revenue, because you've got a—

Senator Canavan: I can't comment on the details to that level. As I've discussed earlier, the reason for this cap is well-known, because—

Senator PRATT: It's moronic.

Senator Canavan: No, because when governments lose control of finances, as the Labor Party did, tough decisions have to be made. We've made this decision, and while we're still in deficit the cap will apply.

Senator PRATT: But this is a decision that limits government revenue, in this case, because CSIRO will eventually be precluded from bringing in more revenue.

Senator Canavan: I'm not accepting or denying that. That question is for another committee, not for this one.

Senator PRATT: I just want to confirm that you haven't yet sought a request. How are you managing the prospects of future work and funding from external agencies in terms of the impact on the cap? Have you had to reconsider, while you're juggling that cap, any external sources of revenue?

Dr Marshall: I mentioned that over the past four years we've grown consistently, which is the first consistent growth in a long time for CSIRO, which is really good. But the other thing we've done is become, according to the data, the most collaborative and connected part of the
whole science system, which means we have a lot more students working on our campuses; we do a lot more collaboration with other Australian universities. One opportunity for us is to share more of that work with them so that we don't actually have to increase our fixed labour force but we can still increase the delivery of impact to the nation. That impact measure, by the way, we've increased from about $1 billion, externally audited, when we started to a little over $3 billion last year. So, the strategy seems to working and seems to be delivering well. The trick now will be: can we bring in more of the university researchers to help us continue to grow that impact?

**Senator PRATT:** And you bring them in as university researchers working for someone else other than CSIRO?

**Ms Zielke:** As Dr Marshall was saying, we collaborate with a large number of organisations. So often some of the projects we work on are actually collaborative projects, so we will use people who are potentially researchers in a university with researchers from CSIRO and potentially other parties to bring those teams together to undertake those. There are also other recruitment mechanisms available to us. We work to make sure that we're balancing all of those opportunities, noting that our people work extremely hard to make sure that they're considering all elements in considering positions on a case-by-case basis. Yes, ASL is a restriction for us, but there are lots of other factors we consider.

**Senator PRATT:** How many new positions in the agency do you currently have on hold? Is it 170 in a total of about 250 vacancies?

**Ms Zielke:** We don't actually have positions on hold at the moment.

**Senator PRATT:** Do you have vacancies in the agency that you're unable to fill currently?

**Ms Zielke:** We have vacancies that we're recruiting for.

**Senator PRATT:** How are you managing that recruitment in the context of the cap?

**Ms Zielke:** We're considering each of those positions on a case-by-case basis.

**Senator PRATT:** You're at your cap currently—are you?

**Ms Zielke:** Yes, we are.

**Senator PRATT:** How many positions do you have advertised currently?

**Ms Zielke:** Sorry, I'd need to take that on notice. We have approximately 100 positions being advertised at any one time. The organisation is sizeable, and we often have positions turning over and recruitment activities underway.

**Senator PRATT:** Yes. I would understand you would have some positions, where you've got staff leaving, that you're recruiting for. But it does sound to me as though within that 100 you must have people who you're trying to recruit even though you've got this cap in place for new positions.

**Ms Zielke:** Yes, there will be.

**Senator PRATT:** Do you know how many there are?

**Ms Zielke:** No, I don't have that information.

**Senator PRATT:** Are you able to take that on notice for us?

**Ms Zielke:** I'm happy to do that.
Senator PRATT: Thank you.

Ms Zielke: Can I just note that a lot of our positions are term positions normally anyway. So, if we agree to enter into a project, we will most likely recruit people for the term of that project in a number of cases.

Senator PRATT: Is that still subject to the cap?

Ms Zielke: If they're bought on directly by CSIRO, then, yes, but that's only one mechanism available to us in that regard.

Senator PRATT: In *The Canberra Times* on 22 October it was claimed there are 1,500 jobs under review due to the government staffing level cap. I understand that that figure has been rejected by CSIRO as incorrect and pure speculation. I'd like to give you an opportunity to end the speculation and let us know how many jobs are actually under review?

Dr Marshall: For the 5,500 CSIRO staff who maybe listening tonight, as we've told them personally, there's no redundancy plan. There's no big reduction plan or anything like that. Because we're such a large organisation there is a natural turnover—term contracts end, people leave or they get extended. We also have a lot of students that work in CSIRO and, we think of them as interns but the technical name for them is, post docs. These are kids that have just graduated, and they come into CSIRO to actually work on an industry project so that they're more employable by industry. They tend to cycle through as well. So we have flexibility in the size of our workforce quite naturally without having to make any other changes.

Senator PRATT: Yes, but the cap must limit your natural growth surely, which essentially would mean, if you've got a new priority that you want to accelerate even though you've got other areas that are performing well already in-house, how do you manage that currently?

CHAIR: By growth, do you mean employment growth?

Senator PRATT: Growth of programs that would have employment attached to them.

Dr Marshall: So the cap means we can't increase the number of people on our payroll, but we can engage people through other ways. Often we engage post docs or students through universities, for example.

Senator PRATT: How many people working for CSIRO have been required to get ABNs to perform work for CSIRO? How many in total are contracted through an ABN rather than as staff?

Ms Zielke: None.

Senator PRATT: How many people working for CSIRO are on fixed-term contracts, and what is the average length of those contracts?

Ms Zielke: At the moment we have around 1,140 temporary staff. They are on temporary term appointments, employed by CSIRO, and those terms can vary from anything up to, say, three years. They might be six months, but generally postdocs are employed for two- or three-year periods in that regard. Sorry, was there another question in what you asked?

Senator PRATT: I asked about fixed-term contracts and what the average length of those contracts is.
Ms Zielke: That's our term appointments for ASL. Of course, we also, as Dr Marshall said, have people who work on projects through universities and through other arrangements as well.

Senator PRATT: Did Finance provide guidance on whether the ASL cap does apply to external revenue sources? Did you seek guidance on that?

Ms Zielke: It's a consideration in relation to the estimate that we've been provided with. For our purposes, it does relate to the number of people that CSIRO employs. It's actually not about the way in which the funding is sourced. It's about the number of our staff.

Senator PRATT: So, in other words, the cap applies to external revenue sources.

Ms Zielke: It does, but noting that's not the purpose of it in the first place.

Senator PRATT: How much private investment has been turned away due to capacity constraints due to the staffing cap?

Dr Marshall: We—

Senator PRATT: Clearly, you're going to efforts to make sure that that's not the case. I hear you about your collaborative approaches. But clearly it must, at some times, make it difficult. For example, when someone says, 'I want to give CSIRO some money for this fantastic project,' do you say, 'Well, give it to us and we'll pay the university,' or, 'Give it to the university and the university will put someone on staff and we'll collaborate'? Surely it's a lot more complicated now.

Dr Marshall: Actually, Senator, we do turn away work, and that's nothing to do with the ASL cap. The first question we ask is, 'Is CSIRO the best placed to deliver this? We don't want to compete with industry. We don't want to compete with universities. So we only take on work where we think we're the best organisation to deliver it and there's basically no-one else that could do it as well. I wouldn't want to give you the impression that we accept all the work that we get anyway. Then, with the ASL cap, it's really a question of prioritising. CSIRO's working on six national challenges. I think you've probably heard of them before. We tend to think of everything in the framework of those six big national challenges, and, if the work isn't related to solving one of those, then we generally say no to it.

Senator PRATT: It still sounds like you're juggling it within the cap.

Dr Marshall: There's absolutely a perception in the minds of our people—again, because the ASL cap is a very new concept for most of us in CSIRO—that it's like a roadblock. I think, in practice, it's nowhere near the impediment that it might seem. But it absolutely is a perceived impediment, and that's why we're putting out things like this try and get the facts on the table, so people don't worry about it so much and focus on continuing to deliver benefit for Australia.

Ms Zielke: It is a change process for us. It is the challenge in working that through.

Senator PRATT: In terms of the guidance that you received from Finance in these discussions, have they given you any written guidance on how the cap applies in your circumstances?

Ms Zielke: Nothing in addition to the guidelines that are already issued in relation to that. I will just check with my CFO to ensure there's nothing else.
Mr Munyard: The advice that we get from the Department of Finance is predominantly through estimates memorandums, or such, that would go to whole of government—nothing specific directly to CSIRO.

Senator PRATT: It seems pretty stupid for the government not to think about the bespoke circumstances of unique agencies. There's an estimate that the impact of the staffing cap has cost $15 million of private investment, as having a $180 million hit to gross domestic product.

CHAIR: Who is that estimate from, Senator Pratt?

Senator PRATT: I don't know. I will have to ask the airwaves to tell me where that comes from. What economic multiplier does CSIRO have for the impact of cuts or lost co-investment or staffing caps?

Ms Zielke: We haven't actually determined that at all. Dealing with this change for us at the moment is new. But, obviously, the ASL estimate has been around for many years. This is new in us responding to it at the moment. Anecdotally, we don't see it as making a huge difference at this stage.

Senator PRATT: What about the department?

Ms Kelly: I'm sorry?

Senator PRATT: Have you modelled the impact of a staffing cap on an agency that brings in external revenue to 40 per cent of its revenue?

Ms Kelly: As the minister indicated, the policy behind the staffing cap is a matter for the Department of Finance. I'm not aware whether they've done any modelling, but I don't believe that the department has done nor would it be appropriate. It is the responsibility of Minister—

Senator PRATT: If my statement was true, that it has had a multiplier effect, it sounds like the government wouldn't—I'm not speculating whether it is or isn't true—

CHAIR: I thought you were asking them to speculate on that.

Senator PRATT: No. What I'm saying is that it wouldn't matter if you were losing 60 per cent or 70 per cent of revenue from external sources because the cap would apply anyway.

CHAIR: We will take that as a statement.

Senator PRATT: Can you confirm that the last CSIRO staff survey occurred prior to the imposition of the staffing caps?

Dr Marshall: No. The staffing cap has been in place since 2013.

Senator PRATT: When was your last staff survey and when will the next one occur?

Dr Marshall: July survey and August result.

Senator PRATT: It has been in place since 2013 but when was it that your staffing level met the cap?

Dr Marshall: This year.

Senator PRATT: So that's probably a more accurate way of me framing the question. You said the last survey happened in August?

Dr Marshall: July, I think, and we got the results in August. We'll do the same thing next year.

Senator PRATT: What issues were raised in terms of the cap in that survey?
Dr Marshall: It hadn't really impacted us yet so there weren't issues raised. It had the highest morale results we've ever measured in CSIRO, at least in terms of—

Senator PRATT: Congratulations. I know you're a great place to work. You should be recruiting more people.

Ms Zielke: Can I just note that the survey was actually held in May and results in July. I apologise I gave the incorrect months.

Senator PRATT: Thank you. The CSIRO act states:
The Chief Executive may appoint such persons to be officers of the Organisation as the Chief Executive determines are necessary for the purposes of this Act.
The terms and conditions … of officers appointed under this section are such as are determined by the Chief Executive.

Doesn't this give you clear legal powers to appoint the staff needed to operate CSIRO appropriately and to determine the terms and conditions of the staff that are appointed? Do you have a mandate to ignore the staffing cap? What's the legal position in that regard?

Dr Marshall: In the SIR Act it also specifies that the board will follow any directions of the minister.

Senator PRATT: Has CSIRO sought legal advice on this matter? No, clearly not. Have you considered not applying the staffing cap to the non-government revenue component of the operation?

Dr Marshall: That is a discussion that's ongoing with the Department of Finance, but as I said the purpose of CSIRO isn't to generate external revenue.

Senator PRATT: That is a discussion that's ongoing with the Department of Finance, but as I said the purpose of CSIRO isn't to generate external revenue.

Senator PRATT: Maybe it would help to say that one of the things that we've learnt previously in this sort of situation is CSIRO needs to show that it has exhausted all other avenues and then go to government to request help with whatever we're doing—when we created the fund, when we created the ON program. That's a good practice to make sure that you really do need exemptions or you really do need help. To be fair, the Department of Finance has been incredibly helpful in helping us create these new things that've been—

Senator PRATT: That's right. You might find the staffing cap becomes less relevant because you continue to grow and grow and grow from external revenue but that will only matter if the cap is not in place. Does CSIRO believe applying the ASL cap to non-government funded work, which currently compromises CSIRO's operation, may be in breach of the obligations that all CSIRO board and executive members have to CSIRO's act and mission?

Ms Zielke: No.

Senator PRATT: Would you say that if 80 per cent of your funding came from external sources and you still had this 5,000 cap?

Senator Canavan: That is a hypothetical question, Chair. I've been loath to intervene but—

Senator PRATT: This is ridiculous!
Senator Canavan: You said 'if'; it is absolutely a hypothetical question. But the more substantive point I'd like to make is that it's starting to get a little repetitive, because a number of times the same imputation has been made about the impact of the ASL cap. That's been answered a number of times.

Senator PRATT: I've had specific questions. I've had different questions. The fact that witnesses return to the same statements does not mean I haven't asked different questions.

CHAIR: The minister is entirely correct: we are verging into some pretty hypothetical territory here.

Senator PRATT: Is CSIRO bound by the APS bargaining code?
Dr Marshall: The bargaining framework?
Senator PRATT: Yes.
Dr Marshall: Yes.
Senator PRATT: How did you come to be bound by that bargaining code? Was it a suggestion or a directive?
Ms Zielke: It was a directive.
Senator PRATT: From government?
Dr Marshall: I believe that goes back to Minister Macfarlane.
Senator PRATT: Have you sought legal advice about whether outsourcing of work could be in breach of several provisions of the CSIRO enterprise agreement—namely, clauses 6, 8 and 10? Will the executive allow this matter to be handled by the Fair Work Commission?
Ms Zielke: We don't believe we are in breach of the enterprise agreement. Yes, we understand the union has made a submission to the Fair Work Commissioner, and obviously they're the appropriate decision-maker in relation to that.

Senator PRATT: So there'd be no problem in going to the commission, because you'd be firm on your success there on those issues?
Ms Zielke: Well, the union has already taken that.
Senator PRATT: So you're going in to argue the case that it applies. Have you received any further advice or directive on applying the code since Senator Macdonald provided advice in 2014?
Ms Zielke: The 15th of July 2014—by the sounds of it, that's similar timing in relation to our last advice, yes.

Senator PRATT: Dr Marshall, it sounds like you've had discussions to get out from underneath the cap with the department, or you're still negotiating about that. What about with respect to the bargaining code? You're happy to be bound by that? That seems to be what you've said.

Dr Marshall: We had discussions in the previous negotiation for the EBA—both for the main EBA for CSIRO and also the EBA for Tidbinbilla, where we run NASA's tracking station—with the Public Service Commissioner and sought flexibility on various aspects of that, which we received and were able to successfully conclude that bargaining. That's the EBA that's in place now. I expect that the next EBA bargaining won't really give any material change to the terms and conditions. I think we got the best deal possible within the
framework. Hopefully, as we go through that process with the staff association, we'll both reach that conclusion, and then we can move to implement a new EBA and get on with our work.

Senator PRATT: It seems you've had a number of discussions about the cap. I'm assuming, therefore, you've had meetings with both the department and the Department of Finance about the cap.

Ms Zielke: Yes.

Senator PRATT: Did you request, at any of those meetings, not to be bound by the cap and the code?

Ms Zielke: It is government policy, and we are required to abide by government policy.

Senator PRATT: But clearly, therefore, you're discussing the impact of the policy with the government.

Dr Marshall: The nature of the discussions was more for us to fully understand what our options are and where we might find flexibility in order to navigate through, and the Department of Finance has been very helpful in guiding us there.

Senator PRATT: Do you have a result yet on the staff survey that closed yesterday with respect to the upcoming enterprise agreement?

Dr Marshall: I should explain, Senator. One of the powers the CSIRO has is the ability to roll over the existing enterprise bargaining agreement. I didn't want to do that without asking how staff felt. Roughly, 40 per cent of the staff in the organisation wanted to see us. Thirty-nine per cent wanted to see us go back to bargaining, and that's a significant enough portion that I couldn't, in good conscious, roll over, so we will proceed with bargaining.

Senator PRATT: You will proceed with bargaining for a new EBA. Thank you.

CHAIR: Could I just ask a follow-up question to one of your answers to Senator Pratt. I didn't quite hear what the numbers related to. You talked about going from $1 billion to $3 billion in collaborative projects?

Dr Marshall: No, Senator. One of the challenges, for me at least, with CSIRO is: what is the ROI? What does the government get for its investment in CSIRO? So CSIRO developed an impact measurement framework that's today globally recognised as one of the best in the world. In 2015, we measured the impact we'd delivered in the prior year at about $1 billion. This is done using our framework but using external auditors. Last year, we measured that impact a bit over $3 billion.

CHAIR: This is the direct economic impact that CSIRO is having on Australia?

Dr Marshall: Correct. I'd like to see that going up every year.

CHAIR: It sounds like it is going up, so that's great.

Dr Marshall: So far, Senator.

Senator WALSH: I want to ask you to clarify your answers in relation to the use of contract staff, just to better understand your explanation. You said in answer to Senator Pratt's questions that about 22 per cent, or 1,140, of your staff are on fixed term contracts and that none of your staff have been 'asked to get an ABN'. In this document that's been tabled, you have advice for business units—that, if they're starting to bump up against the cap, there are
certain things that they can do, one of which is increase the use of contractor labour. What does that mean?

**Ms Zielke:** What we're basically doing is prioritising our activities and, as I mentioned earlier, making sure that we look at each position on a case-by-case basis and determining what the best mechanism is to make sure that we get the right capability for the role. Where is it located? A lot of our roles are actually in regional areas as well, so where can we source various capability from? What are the arrangements? Is it something that's short term or something that's long term in relation to—

**Senator WALSH:** Sorry—I'll just clarify what I meant. Thank you for your answer. It sounds to me like there's a scientist labour hire company out there and you get this labour hire company full of scientists to come in and do the work.

**Ms Zielke:** Senator, they're actually—

**Senator WALSH:** What's the arrangement that you're describing here in the memo?

**Ms Zielke:** Noting Dr Marshall's comments earlier, I'm quite conscious of the fact that we're talking with our staff as part of this conversation as well. We prioritise positions and look at where we can source capability from. Capability might be by using a researcher through a university or another publicly funded research agency. For example, it could be a role for which a labour hire position is highly suited. Obviously there is a range of skills and capabilities across CSIRO.

**Senator WALSH:** Can we have, on notice, some information about your use of labour hire so we know how many direct employees you have? You've answered how many of them are on fixed term contracts. Can we have the names of the labour hire entities that you use and the number of workers that you're engaging through that mechanism, either now or on notice?

**Ms Zielke:** Senator, if it helps, we have about 200 people on labour hire within the organisation, noting that our head count at the moment is around 5,900 people, plus affiliates of about another 3,000.

**Senator WALSH:** Are they mostly for general administration or operational roles or are they scientists on labour hire?

**Ms Zielke:** Anecdotally, I would say that they are largely administrative roles, but there are employment agencies specifically for scientific researchers.

**Senator WALSH:** It's a new world.

**Ms Zielke:** It's very much a new world. I'm conscious of that.

**Senator WALSH:** I would still like to have, on notice, the names of the labour hire agencies that you're utilising and the number of people that you have on staff.

**Ms Zielke:** That's our public panel, but I'm happy to take that on notice.

**Senator PRATT:** Are you already in breach of the cap and by how much?

**Ms Zielke:** We're close to the cap. At the moment, I think we're slightly over it, but we expect to meet the cap by the end of the financial year, noting that it's an average, as I'm sure you're aware, across the whole year.

**Senator PRATT:** Yes, so 5,900 would account for some part-time staff or something with labour—
Ms Zielke: Yes.

Senator PRATT: Could I ask the department: is it Minister Andrews or Minister Cormann who has the final say on the cap, if it were to be removed?

Senator Canavan: It's a policy set by the Department of Finance, so it's Minister Cormann.

Senator PRATT: Thank you.

Senator WALSH: I would like to understand. You did say earlier, Dr Marshall, that you're starting to bump up against the cap and have some capacity constraints. You're finding some creative ways to deal with that, including collaborations. Can I just make sure I understand that. If there were a proposal to do some work on a topic and it fitted with your six key core areas, it was a priority for CSIRO and it fitted with everything that you wanted to do, are you saying that on many occasions you would partner with an external entity and the people who would otherwise have been employed by CSIRO would be employed by the other entity? Is that one way of doing it?

Dr Marshall: That is one way, Senator. Maybe if I gave you a concrete example it would be easier to explain. When we created CSHOR in Hobart to look at seasonal and indication climate modelling, climate prediction, we brought in about $10 million from the Chinese Academy of Sciences and we shared part of that funding with the University of New South Wales and the University of Tasmania, and then they put some people into the centre alongside our people. That's an example of where we shared some external revenue with other parties so that we didn't have to grow our workforce; we could let them grow theirs. We've done a number of arrangements like that, where we've helped grow university capability. We've also created a number of what we call joint appointments where we take a CSIRO person and we make them a professor at a university and they have two roles. That's good for ASL because it only accounts for half on our books and half on the university's books. It's also good for connecting the universities better to industry.

Senator WALSH: How much organisational time are you spending having to navigate this cap and come up with these creative solutions?

Dr Marshall: CSIRO used to have a thing called the matrix, where everyone had two and sometimes three bosses. I can tell you that it was a hell of a lot more difficult to navigate that. Modern digital systems make this pretty easy to navigate, and we do have some very creative people in the organisation.

Senator WALSH: Finally, I'll just check your evidence now that I understand the collaboration model. Your evidence is that there hasn't been a case that you can identify where you've had to knock back a project, a partnership or a collaboration that fits within your six core areas and meets your mission—you haven't had to knock anything like that back because you've been unable to accommodate such a project because of the staffing cap?

Dr Marshall: I'm not aware of a specific instance. I can't say we haven't, because I'm not aware of all the things that we've knocked back. I'm not aware of one.

Senator WALSH: Thank you.
Senator ROBERTS: Thank you all for attending. On 13 October 2019, the ABC entertainer Dr Karl wrote in a tweet: 'Current episode of climate change is 100 per cent caused by human activity.' Does CSIRO's science agree with this statement from Dr Karl?

CHAIR: You can answer as you see fit.

Senator Canavan: We might take it on notice, given that it's a tweet, Senator Roberts. It might be useful to let Dr Marshall see it in the context of the overall science and provide any useful information. It's a broad question that I would imagine Dr Marshall might seek advice about.

Senator ROBERTS: On 19 June 2019, just a few months ago, Andy Pitman, the director of the ARC Centre for Excellence for Climate Extremes and author of the *Intergovernmental panel on climate change assessment reports* 3 and 4 said:

This may not be what you expect to hear but as far as the climate scientists know there is no link between climate change and drought.

Does CSIRO's science agree with this statement from Andy Pitman?

Dr Marshall: If you want to talk about drought, it's one of the areas we are really concerned about for Australia and it is absolutely work that we done don't turn away. I would love to talk with you about drought, but you can't solve these things in the 140 characters of Twitter.

Senator ROBERTS: That was a 20- to 30-minute speech.

Dr Marshall: I see, sorry.

CHAIR: You have taken an extract from the speech, with all due respect, Senator Roberts.

Senator ROBERTS: It's a clear statement.

Senator Canavan: I'll allow the officials to comment as they wish. I think it's a little unfair to start asking officials to comment on the research merits or statements of other scientists on the hop, so to speak. Maybe questions can be rephrased a little more around the general science, rather than seeking a 'he said, she said' type approach. That's probably not quite what this forum is for.

Senator ROBERTS: With respect, this is pretty simple: is there a link between climate change and drought?

Senator Canavan: That is a different question and probably a better way to frame it.

Dr Marshall: Australia has had drought for a long time. We are the most arid continent on the planet. We also have one of the most variable climates. That has been the case for a very long time, pre-settlement by the West.

Senator ROBERTS: Does climate change affect drought?

Dr Marshall: That is a different question. Does climate change cause drought? No. Does it affect it? We believe it does.

Senator ROBERTS: In what way?

Dr Marshall: We believe it will increase the frequency of drought over time.

Senator ROBERTS: You believe?
Dr Marshall: The data and the modelling suggest that it will increase the frequency of drought.

Senator ROBERTS: There's a lot of belief around climate change. On 19 September 2019 Greens MP Adam Bandt said:

Climate change is making Australia's droughts longer and more intense. We need action on climate to reduce the threat of drought.

Does CSIRO's science agree with this statement that climate change is making droughts longer and more intense?

Senator Canavan: This will be my last intervention on this. Again, I'm not going to stop Dr Marshall saying what he chooses, but I fully understand that officials are not really employed to make commentary on scientists external to their organisation and certainly not contributions from other members of parliament. I don't really want to turn estimates into a review of every statement made in this place, but I'll let Dr Marshall answer, if he can.

Senator ROBERTS: I'm just asking him if Australia's droughts are made longer and more intense by climate change.

Senator Canavan: That is different. Sorry, I just think it would be more helpful for the committee—

CHAIR: If they were phrased as questions.

Senator Canavan: if they were phrased as questions not as, 'This person said this; do you agree with that?'

Dr Marshall: We did a wonderful and groundbreaking piece of work, which was published in Nature and was recognised as is the first time that it has ever been done, called the Australian national outlook. I'll send you a personal copy of it to review. I think it does a great job of navigating Australia through the impacts of having one of the most variable climates on earth and being the most arid continent. In that document it says something along the lines of: 'Since 1950, Australia has become warmer, we have had less rain in the south—

Senator ROBERTS: Since 1950?

Dr Marshall: and more rain in the north, with a greater variability in the weather patterns from year to year.' Using that historical data and the forward projections—they are projections based on science, but they are projections—we mapped a number of scenarios to try to figure out the best way to navigate Australia through these challenges and to enhance Australia's economy in the process. I think you would find it really useful reading and I would be happy to sit down with you and go through it.

Senator ROBERTS: Sure, I look forward to it. I am wary, though, of things that are based on models and that are looking only over the short term, such as the 1950s.

Dr Mayfield: I would like to refer you to the State of the climate 2018 report.

Senator ROBERTS: Good, I was about to raise that.

Dr Mayfield: In that it does talk about observations in terms of rainfall and a range of other climatic events. In that we do identify that there is an increasing prolonged drought period coming forward as we see that.
Senator ROBERTS: I've read it and I will have more to say about that later. For now, on the rear cover of the *State of the climate 2018* report that was just held up by Dr Mayfield there is a disclaimer which talks initially about copyright but then goes on and says:

> It is advised that users seek additional information or expert scientific advice before using the contents of this report in any specific situation.

Could you explain what you mean by that.

Dr Mayfield: You can appreciate that this information provides long-term projections and measurements, especially when you come down to modelling work; it doesn't necessarily go to specific events or very localised regions. When you apply this information, you need to make sure you are applying it in the right context. Those comments are in relation to that.

Senator ROBERTS: Is CSIRO admitting that its report is not scientific or not expert-scientific?

Dr Mayfield: No, it's saying that, when you use information, you need to apply it in the correct context.

Senator GALLACHER: But not Senate estimates!

Senator Canavan: Ignore the peanut gallery.

Senator ROBERTS: We'll go on to the next question, and I go back to 2016. The consequences of political positions on climate and energy prices, regulatory controls and stealing of farmers' property rights without compensation is costing our country billions of dollars and exporting jobs. It is expecting to cost our economy trillions of dollars. On 26 September 2016 at your first presentation to me in Sydney I asked:

What in the 2000 year climate record indicates impending danger?

CSIRO scientists and administrators refused to indicate anything of danger in our climate and said that they would not use that word. Does CSIRO still refuse to attribute danger to increasing human carbon dioxide output.

Dr Marshall: Danger?

Senator ROBERTS: Yes.

Dr Marshall: Danger is an emotional word. We try to stick to presenting the data, the science, and, where we have models and projections, give disclaimers to the fact that they are models and projections, so I don't know that we'd use the word 'danger', because it's more of an emotional word.

Dr Mayfield: If I could add to that: our work looks at trying to understand climate change, trying to model that and ultimately, in time, predict that better, and then looking at ways you adapt to that and ways you might mitigate it. In our context we're trying to understand the changes and work out how you adapt and work to that.

Senator ROBERTS: I think Dr Marshall was there, or you might have left just before that statement, but the CSIRO scientists and their own staff agreed that the use of the word 'danger' was largely a political construct, and CSIRO wouldn't have anything to do with it. I can hear what you are saying. After we explored the use of the word 'danger' and agreed that apparently politicians attributed danger, Steve Rintoul, who was at the time Interim Director of the CSIRO Climate Science Centre, replied, 'Our role is stating what the science tells us about what has changed and the causes of that and projections of future change.' You would
agree that variation is natural in every type of object and activity and within every process. No two objects or actions are identical. You would agree with that? At a very fine level you can measure difference between—

**Dr Marshall:** We can measure things. I'm not sure I understand the full context of your question.

**Senator ROBERTS:** Variation exists in everything.

**Dr Marshall:** Certainly in this chamber.

**Senator ROBERTS:** I can stand up next to Dr Mayfield and we'll see variation.

**CHAIR:** Good answer.

**Senator ROBERTS:** Statistically there are many types of variation, including inherent, natural, seasonal and cyclical. These are present naturally within climate and, if considered only over short periods—for example, the cooling part of a natural climate cycle or the warming part of a natural climate cycle—appear to be a process changed, yet they are not a process changed; they're just cyclical. Could CSIRO, on notice, please provide the statistically significant variation that proves there has been a process change—that is, variation, that is beyond or outside natural, inherent, cyclical or seasonal variation—over the last 350 years?

**Dr Mayfield:** If I can bring to your attention again the three meetings that we had in 2016 through 2017. There was a large amount of information that was presented and a number of transcripts taken. I've actually got them sitting here. We've covered that territory at that point in time. I'm very happy to table that documentation for your reference.

**Senator ROBERTS:** I'm happy for you to table it. The point is the first meeting in September 2016, we asked for evidence that carbon dioxide from human activity is causing climate change. None was presented that established causal relationships.

**Dr Mayfield:** The presentation—

**Senator ROBERTS:** The second presentation—and CSIRO objected initially to recording that and eventually they said we could record it—CSIRO was asked to provide evidence over the last 10,000 years of earth's history that indicated something was unprecedented in current climate. CSIRO would not let us record that. We then had a—

**CHAIR:** Senator Roberts, we are getting towards a discussion rather than Senate estimates.

**Senator ROBERTS:** I'm just answering the question about that. Dr Mayfield said that he's already presented it, and I doubt that.

**CHAIR:** I've given you a fair bit of latitude. I think we either need to get back to questions or move on.

**Senator ROBERTS:** I would like the CSIRO to provide me with the statistically significant variation that proves there has been a process change that is variation beyond or outside natural inherent cyclical or seasonal variation over the last 350 years.

**Dr Mayfield:** As I've stated, I believe the presentations that were made in the second and third meetings cover that.

**Senator ROBERTS:** Did you identify the statistically significant process change in that? No, you did not.
Dr Mayfield: The work that we have done, which we would stand behind, is in those presentations, and I'm very happy to table that for your reference.

Senator ROBERTS: I've got one, but I'm happy for you to table it.

Dr Marshall: If we put that question aside just for a minute.

Senator ROBERTS: The one that you won't answer. Yes?

Dr Marshall: I mentioned CSIRO works on Australia's big challenges, and let's put climate science aside for a minute and look at what is happening in the world. There is a massive market shift globally towards renewable energy sources. That's a fact. Given that's happened, Australia's at risk, because $180 billion of our export revenue comes from coal, iron ore, LNG, which will all be affected by that. More important, more than a third of tax revenue from industry comes from those three industries. We can't lose that tax revenue. That is the threat; that is the danger. So what CSIRO is working on in terms of a mitigation strategy is trying to find other export materials, like hydrogen, that could replace the materials that are being put at risk by this global market shift. Regardless of what anyone believes about climate change one way or the other, the market is shifting, and it will hurt this country if we don't figure out how to navigate it. That is the essence of the Australian national outlook: how do we navigate the industries so we don't lose them and so we retain our quality of life.

Senator ROBERTS: It's a very simple answer to you, Dr Marshall: China is producing so many more times carbon dioxide than we are. Each year, the Chinese produce more carbon dioxide.

CHAIR: Senator Roberts—

Senator ROBERTS: I'm just trying to answer that. So thank you very much. On 3 October 2019 the Prime Minister made comments about doing a review of unaccountable internationalist bureaucracies like the United Nations, which are damaging Australia's democracy and sovereignty. He's at last plucked up the courage to do that. Has CSIRO considered the political influences of the UN on its IPCC reports on which you rely?

Dr Marshall: The political influences?

Senator ROBERTS: Yes. Well documented.

Dr Marshall: CSIRO presents its own data, its own analyses, and we try very hard to keep the politics out of it, but we are not always successful as you've seen previously.

Senator ROBERTS: As some of your research scientists can attribute, yes. The point is that CSIRO cites and relies upon the IPCC's evidence—reports, sorry, I should say?

Dr Marshall: I think generally the data isn't it, Peter?

Dr Mayfield: Its data. We also understand the process the IPCC uses to undertake those assessments. So the IPCC process is really about how you coordinate the scientific data into specific responses to questions. We do participate in that process, and we do believe in that process.

Senator ROBERTS: The process the InterAcademy Council really discredited?

CHAIR: Senator Roberts, we are going to have to move on.

Senator ROBERTS: Three years ago the CSIRO admitted to me it did no due diligence on UN IPCC yet it cited it. CSIRO uses UN IPCC reports as the basis for its conclusions.
Why do you not do due diligence on the UN IPCC reports, especially given that the UN IPCC itself admits that to be an IPCC reviewer, you need to be a self-declared expert. Is that good enough for the CSIRO?

**Dr Marshall:** Being a self-declared expert?

**Senator ROBERTS:** No, relying upon a body that says its reviews rely on people who declare themselves to be experts?

**Dr Marshall:** In general, CSIRO relies on its own data, its own modelling and its own scientists. With respect to climate data, we get maybe as much as half of the world's climate data because we do most of the work in the Southern Hemisphere and we rely on bodies in the Northern Hemisphere to gather the other half of the data. Climate change is a global issue. Australia isn't going to solve it on its own, although CSIRO's made some amazing breakthroughs in the last three years to really significantly reduce emissions from cattle, for example, without damaging the economy of cattle—actually potentially improving the economy there. Australia's contribution as a country to greenhouse emissions, as you said, is a bit over one per cent. China is the highest emitter followed by the United States.

**Senator ROBERTS:** So you are going to continue to rely upon and cite a body that says to be a reviewer of that body you just have to be a self-declared expert, and a body that's heavily politically influenced?

**Dr Marshall:** It depends on what we are citing. If it's actual hard data, that is what CSIRO relies on.

**Senator ROBERTS:** Citing something like that—

**CHAIR:** We are verging back into discussion again.

**Senator ROBERTS:** I'm finished. Thank you very much.

**CHAIR:** I believe we are finished with CSIRO. Thank you very much for your attendance this evening; we do appreciate it. You go with our thanks.

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**IP Australia**

[20:22]

**CHAIR:** I welcome representatives from IP Australia to Senate estimates this evening. Did you wish to make any opening remarks? IP Australia has been in front of this committee pretty recently so I'm hoping the answer is no?

**Mr Schwager:** The answer is indeed no. Thank you.

**CHAIR:** Excellent. That's a very good answer.

**Senator GALLACHER:** I'll go straight to the Intellectual Property Laws Amendment (Productivity Commission Response Part 2 and Other Measures) Bill 2019, which we have looked at in a legislation inquiry. There is still concern in the industry that there is nothing in place to assist people as we speak. Has IP Australia had a look at what greater measures and initiatives they could have in place to assist SMEs with accessing standard patents in the event ultimately that the innovation patent will be not available to them? Have you done any work on that?

**Mr Bennett:** Thank you for the question. The government does remain committed to providing dedicated support services to help SMEs navigate the IP system. This includes a...
new program for dedicated case managers in IP Australia who'll support Australian SMEs through the patent application process. In addition, there'll be support for expedited international applications and an SME patent fast track. We are committed to a purpose-built web platform to support SMEs, including 24/7 assistance, industry advice and an IP portfolio management tool. We are also enhancing our education services for small business in regional areas.

Senator GALLACHER: Are the case manager and those initiatives in place now?

Mr Schwager: Some are in place and some have been prepared during the phase-out of the innovation package.

Senator GALLACHER: Perhaps on notice we could get the full script of initiatives and the stage at which they are at?

Mr Schwager: We can provide that.

Senator GALLACHER: Is that publicly available now?

Mr Schwager: Not at that level of detail. We have publicly provided that list of initiatives through our website but we haven't yet provided details with respect to implementation.

Senator GALLACHER: The criticism in some sections of the industry is that these should all have been in place before you got rid of the innovation patent system. That is the criticism.

Mr Schwager: I understand the criticism. As I said, we do have some of this in place now. We obviously need to ramp up some of it as the innovation patent is phased out over the next 18 months.

Senator GALLACHER: Okay. Perhaps on notice if you could step that out: what is in place, what is coming and the like.

Mr Schwager: I am happy to do that.

Senator GALLACHER: I understand there was generally bipartisanship about the legislation, but there were pockets of people saying, 'Look, this is valuable to us. It protects our business. They are moving too soon. It doesn't cost them anything. Why are they doing it?' What level of consultation did you undertake? Did you get around to every state and territory? Or did you do it through a website campaign? Who did you consult with?

Dr Mitra-Kahn: We had a fairly extensive level of consultation. I might turn to my colleague Dr Mitra-Kahn to elaborate on our consultation process.

Dr Mitra-Kahn: Thank you. Over the last four years, IP Australia has been consulting on the reform through the innovation patent system and whether or not the system is performing as it should be. That started in 2015 with the Advisory Council IP. They had a three-year inquiry and they did roundtables and queries and questions. After their report, we consulted on the outcomes of that, through the website. The Productivity Commission then took it on in their terms of reference to look at the innovation patent and they did roundtables in every capital city. They got about 600 submissions. They had hearings. They had open forums—

Senator GALLACHER: Excuse me. So the roundtables were specifically about the innovation patent?

Dr Mitra-Kahn: They were about the whole IP system reform.
Senator GALLACHER: But not specifically about the IP part?

Dr Mitra-Kahn: The ACIP one was. ACIP review was really only about the innovation patent—the three-year process and the consultation around that. IP Australia, following the PC report, consulted on all the proposals and the innovation patent one was broadly canvassed, as it was in the first PC response bill that passed in 2018 and then again in the second PC bill. So people had numerous occasions to comment, and we have taken all those comments in in the way that we are phasing out and implementing legislation.

Senator GALLACHER: I won't make any bones about this. I understand the legislation has passed. What I'm trying to examine is whether IP Australia gets out there and actually consults with the industry. I've got an industry player that employs more artists, more graphic designers and more musicians than most in the country. They don't claim to be a small player by any shake of the tail. But they do employ a lot of Australians in this space that is protected by the innovation patent system, and they say that their product and their hard work will now be much easier to steal, quite frankly. There are jurisdictions where you can quite simply off-load this and copy it. It will make their industry less competitive. Do you speak to those players?

Dr Mitra-Kahn: Without knowing the specific company—

Senator GALLACHER: Have you spoken to Aristocrat?

Dr Mitra-Kahn: We definitely spoke to Aristocrat. The other biggest filer of innovation patents in Australia are with the divisionals. We have spoken to them and to some of their fellow gambling companies. I forget the names now.

Senator GALLACHER: So it's an Australian company, headquartered in Australia, exports all over the world. It employs Australian artists, Australian musicians and Australian graphic designers, and it was using this system very effectively.

Dr Mitra-Kahn: Aristocrat uses the innovation patent system—from memory, but I can get you the details—mainly to divide out standard patent applications. They have all the standard patents. The problem with the innovation patent is that anyone overseas can in fact copy your invention without any repercussions because the innovation patent doesn't protect you outside Australia. Because of the nature of the system, you can't transfer that right overseas. What Aristocrat and others have done very well is they have filed provisional patents, which is an entry point to the patent system, and they get standard patents, which they then taken overseas. So the innovation patent is a part of their portfolio. And we have—

Senator GALLACHER: It's part of their business—I understand.

Dr Mitra-Kahn: Yes.

Senator GALLACHER: What I'm saying is that there are small but vibrant sectors of manufacturing and these other sectors, which are employing Australians and they were using this system to protect themselves. They claim not to have been well consulted by you. How do you defend that? You pointed to the Productivity Commission doing work. The allegation is that IP Australia took a position early without adequate consultation, and the end result is we now have a very small but vibrant sector of manufacturing, and you said yourself, I think, Gorilla Ladders and others were using the system very effectively, at no cost to government by the way.
Senator Canavan: Could I just say the legislation, the decision to close the innovation patent, was a decision of government. So it is probably not fair to ask the official for his opinion on that matter. Obviously, a decision came after extensive consultation—the Productivity Commission review et cetera. But it was not one made—I don't believe—by IP Australia itself. Obviously they were involved in the implementation of the government decision.

Senator GALLACHER: I take it from that, Senator Canavan, that it wasn't IP Australia who advised you to do this legislation?

Senator Canavan: I'm not sure to the extent of the advice that IP Australia gave. I'm not the responsible minister. But, as I outlined, the decision the government took was after extensive inquiry and consultation and a weighing-up of all of those views. It is also a piece of legislation that—as I'm sure you'd know, Senator—received widespread support in the parliament as well.

Senator GALLACHER: It certainly did. But, as always with these decisions, there are also different views in the same side of the support.

Senator Canavan: And we did support your party's amendment to hold a review into the changes. I think after three years or—

Dr Mitra-Kahn: Three months.

Senator Canavan: Three months. We will obviously honour that, and continue to consult with the parliament about the impact of this change.

CHAIR: Could I just ask a question on notice. Is there a technical reason why the sorts of companies that the deputy chair has raised can't use the provisional patent system to gain a similar protection? I don't want to go into the detail now, because it will take too long. But could I just have an answer to that on notice, please?

Mr Schwager: We will take that on notice.

Senator GALLACHER: The industry, or certain sections of it who make representations to myself or perhaps to Senator Patrick or to other senators, are saying: 'The system wasn't broken. We were getting protection out of it. It has been moved earlier than we would have liked and there is nothing in place for us at the moment.' Now you're going to give us a suite of measures which will assist people. Is that correct?

Mr Schwager: Yes. The phase-out is over 18 months. Some of the measures that the government has committed to implement, that we have committed to implement for the government, are in the process of rolling out, for example our 24/7 support, the existing patent system—and we can gear-up our education services around the patent system. So that's a gearing-up process. Then we are looking at how to further roll out some of the other initiatives that I ran through earlier.

Senator GALLACHER: Okay. I understand there was a whole Productivity Commission submission. I understand there were complications from overseas people doing patents and there was allegedly a multiplicity of applications, but it was a very discrete section of Australian manufacturers employing Australian workers doing really well who had protection under this. So I think it is critically important that we have the suite of measures that allows them to continue to enjoy some ability to employ Australians and manufacture in Australia.
Senator Canavan: We fully agree with you there. The fundamental reason—as I understand it—that this decision has been made is because the Productivity Commission found the innovation patent system was not providing significant benefits to small and medium enterprises in this space and, therefore, a decision was taken to try other things. That's not to say there aren't individual companies that have a different view, but the weight of all the evidence before us was that we could achieve these policy aims and goals, which we share with you, in more-effective ways.

Senator GALLACHER: Thanks, Chair.

CHAIR: We have no further questions for IP Australia, so you go with our thanks. Safe travels home.

[20:36]

CHAIR: We'll move onto program 2, in particular subprograms 2.4 Resources, including the National Offshore Petroleum Titles Administrator, and 2.5 Northern Australia development, which includes the Office of Northern Australia and the Northern Australia Infrastructure Facility. Where do you want to start, Deputy Chair?

Senator GALLACHER: I will start with the minister. In a media release on 1 July 2017 you said:

... the ADGSM would allow the Government to intervene, if necessary, to ensure adequate gas is available to Australian homes and businesses.

Am I in the right section?

Senator Canavan: Yes.

Senator GALLACHER: The government has declined to place export licences on Australian LNG operations since that 2017 release. To what extent does that mean there has been an adequate domestic supply? Has that helped?

Senator Canavan: What we set up in early 2017 was, as you indicated, or we announced, we'd established a framework to potentially impose export controls to provide sufficient gas for domestic use in eastern Australia. The objective was always to make sure there was not a shortfall of gas in any one year. As a result of that decision, I would say, we were able to come to an agreement with the gas exporters in Queensland—the three joint ventures. The substance of that agreement is that they committed to offering uncontracted gas—that is, gas not under contract—to the domestic market first. We very much believe has taken some pressure of prices. It is confirmed by reports that that outcome has helped provide additional gas to eastern Australia and remove the threat of shortfalls, and has, seemingly, being confirmed going by reports that the ACCC does. Prices in eastern domestic markets are down roughly 20 per cent from before we made that announcement. As I indicated, we've had regular reports from the ACCC, and we also receive an annual report from the Australian Energy Market Operator on gas supply conditions in Australia. Before the decision was made, that reporting, and particularly the AEMO gas supply opportunities outlook, showed potential shortfalls of gas in Australia. Since that time, over the past two and a bit years, there has not been a shortfall identified. Indeed, the recent report showed that there should be more than sufficient gas in Australia over the interim period. There are still some long-term risks, which go to some of the supply questions, but we very much feel the decisions we've taken, and they
were significant, did have an impact and have helped ease the situation, notwithstanding there still remain issues, particularly about that medium- to long-term supply.

Senator GALLACHER: Chronologically, you had the Australian Domestic Gas Security Mechanism, then you signed a heads of agreement with the Queensland LNG producers and a second agreement with the LNG industry in September 2018. What was the need to go to those direct supply agreements if you already had the gas security mechanism in place? Were they complementary?

Senator Canavan: The direct supply agreements? Are you referring to the arrangements under the heads of agreement?

Senator GALLACHER: Yes.

Senator Canavan: That was an agreement negotiated with the industry. I'm not going to deal in hypotheticals, but obviously the government was considering, potentially, the introduction of export controls to guarantee sufficient supplies of gas. The need for that was alleviated by that agreement with the industry, and, as I indicated, we believe it's had an impact, we believe it has been honoured by those gas producers and therefore it has obviated the need for export controls. We've always said we don't want to impose export controls; it's very much a last-resort measure to try and protect our domestic energy security. So I think it's been a good thing that we've been able to achieve the objectives of the policy through other means.

Senator GALLACHER: Okay. It's reported that the spot price of gas has fallen by about 25 per cent, and you've mentioned that.

Senator Canavan: Yes, it's around 20. It depends on which market and how you measure it et cetera.

Senator GALLACHER: Gas contract offers have fallen by 50 per cent.

Senator Canavan: Again, it just depends on how you measure it. All of that is documented in the quarterly ACCC reports that we've set up through this process. So, for the first time, we now have information about contract offers as well as contracts made. The ACCC has used its information-gathering powers to provide that information. They provide, obviously, an aggregated version of it publicly that doesn't indicate individual companies. But, before the government took this action, there were offers in the marketplace of around $20 a gigajoule. Now offers tend to be in the range of $8 to $12 a gigajoule. So you've seen roughly a 50 per cent reduction from the very high or top offers that were made before we put this policy in place.

Senator GALLACHER: I suppose the million dollar question is that, given that this appears to have happened, that the gas prices have fallen, why hasn't it translated to household and small business costs?

Senator Canavan: I don't have that information at hand. However, the spikes we saw in gas prices did not last a very long time. The prices paid at a retail level or household level will be averaged over a period of time. Households aren't exposed to movements in spot or wholesale prices to the same degree that industrial users or the gas retailers are. But the spike we saw in late 2016, early 2017 was really just for a few months, and then, as I said, we took action and prices came down. I don't have any information—officials might have some—on the impact on retail prices from the ACCC's reports. We might have to take that on notice.
Senator GALLACHER: If anybody was listening or had read that spot prices were down, contract offers were down, and you can argue whether it was by 20 or 25 per cent, or 40 or 50—but households don't appear to have shared in that.

Senator Canavan: I'd also make the point that, in the delivered cost of gas at a household, only a component of that is the wholesale cost of gas, which is what we're referring to. The cost beyond that, particularly to a distribution network, retail et cetera, I'd have to take on notice. I think, from memory, in the ACCC reports it might be only in the order of a fifth or so of the price of a household's gas is in that wholesale cost, but I'll correct the record if that's wrong. That's why you're not going to see that same transfer or pass-through. Our action, really, was triggered by the pressures facing industrial users of gas—manufacturers, power producers et cetera—who are more directly exposed to a 100 per cent impact of wholesale price movements.

Senator GALLACHER: So the pre-emptive review of the gas security mechanism will investigate the ongoing appropriateness of the ADGSM's total market security obligation arrangements. Is that correct? Is the obligation being reviewed?

Senator Canavan: Yes.

Senator GALLACHER: Is it being reviewed?

Senator Canavan: Yes, it is under review at the moment. If we are to declare a shortfall or a potential shortfall, the department—with the advice of those agencies I mentioned; the ACCC and AEMO—calculates an amount of gas that would be needed to remove the market from shortfall. That's the Total Market Security Obligation. Then there is a way of obtaining that gas to get rid of the shortfall.

Senator GALLACHER: So it has been reviewed to allow you to do it?

Senator Canavan: Under the original regulatory instrument we put in place there was a review due by next year. We have brought this review a little bit forward. We made an announcement that we're going to look to develop a potential gas reservation scheme. So we brought this review forward to conduct that. That review is underway at the moment.

Senator GALLACHER: So was it a signal to the industry?

Senator Canavan: Not particularly. As I say, I think the policy has worked—and we've regularly expressed our appreciation for the cooperation of the industry. I suppose what is exercising my mind more is the medium to long-term situation. That's why we've put in place these arrangements to look at potentially a national gas reservation scheme for that medium to long term, particularly as we might develop new gas resources around the country.

Before we get to that point, though, we want to clean up the ADGSM in its current form and review that. The ADGSM was put in place for five years. That's when it sunsets in the current legislation. Obviously that's something we're considering in the review, but we have always said that this is not a long-term solution to domestic gas needs. We need a more consistent and long-term supply for domestic markets.

Senator PATRICK: So, in other words, it is a regulation, not legislation.

Senator Canavan: Yes, a legislative instrument—a regulation.

Senator GALLACHER: Is it disallowable?

Senator Canavan: Yes, it is disallowable.
Senator GALLACHER: I will ask a question—but I'm not 100 per cent sure on the terms of it, though I'm sure you are. The earlier review of the ADGSM intends to clarify the netback price series for gas. Is that correct?

Senator Canavan: One thing it is looking at is how the ACCC's calculation of a netback price informs decisions around a shortfall and the potential triggering of the ADGSM. When the ADGSM was put in place, we didn't have this netback price series. One of the issues that we have had throughout this period is the data on prices—both here domestically and particularly overseas—is somewhat sparse and not always consistent. So one of the things we did—when we did a range of things in response to the domestic gas situation 2½ years ago—was task the ACCC to develop what is called a netback price series. This effectively takes the price that we sell gas for in our export markets—primarily in North Asia—and then and nets off the costs of getting that gas out of the ground here and then to that other country. That price series has been in place for over a year, I think. This review will look at how we formally integrate consideration of that price series and the decisions under the ADGSM.

Senator GALLACHER: What did you use initially? Did you have a netback price then?

Senator Canavan: As I said, primarily what we did and what we will continue to do is rely on the reports of the Australian Energy Market Operator and the ACCC to judge the supply-demand balance in the gas market. Price is obviously an indicator of that. But, before the netback price series, it wasn't really something that was all that consistent or recognised across industry.

Senator GALLACHER: So this is more accepted by industry?

Senator Canavan: I wouldn't necessarily say that. Like any price estimate, there's a fair degree of debate about its applicability. But it is at least one that is now well-established, with some authority, and it is consistent. It's a measure that is consistently updated now every quarter—more regularly, I think, from the ACCC, but their formal report's still every quarter—on gas markets.

Senator GALLACHER: So the ADGSM review is supposed to be completed, by the department, by the end of September. We're almost at the end of October. Is it finished or is it delayed?

Senator Canavan: No, it's still ongoing. There's been a delay in concluding that. That was the original intention. We're still working on a few matters to finalise but expecting it not too far away.

Senator GALLACHER: What's holding you up?

Senator Canavan: It's just continuing consultation on a couple of points. There has been a considerable amount of work done on it, but we want to get it right.

Senator GALLACHER: Is that consultation with the industry?

Senator Canavan: No, just finalising where we want to take this. It's more important to get this right. This review is not due until next year, so we're not in a great degree of urgency, but we will conclude it as soon as we can.

Senator GALLACHER: Will we go to that august journal The Guardian Australia and the proposition you put there:
The basic idea is you keep more of your resources here to boost domestic supplies and lower the price potentially—but that doesn’t work in any other market.

What about Western Australia? Do you think the reservation policy works there?

**Senator Canavan:** Yes, I do, and I’ve said that a number of times, particularly in the last few months. As I’ve mentioned, we’re looking at developing a national gas reservation scheme. It has worked well there in Western Australia. It has some of the lowest gas prices in the world and it’s attracted a significant amount of investment, in the past decade, to boot. You can't really argue with the results.

**Senator Gallacher:** So the quote in *The Guardian* is incorrect.

**Senator Canavan:** Was that a quote?

**Senator Gallacher:** Yes.

**Senator Canavan:** I’ve changed my mind on it, if that’s the case. I don’t know what date that—sorry, I didn’t know you were quoting me, and I didn’t have a date on it. I will freely admit, when I became resources minister, I suppose, I was a free-market resource minister. Some of these views sometimes get mugged by reality.

**Chair:** You were still shaking off the Productivity Commission!

**Senator Canavan:** That’s right I’m continuing my conversion! But you can’t argue with results, and I think I’m not the only person in that boat who has changed their view on these matters in the past few years.

**Senator Gallacher:** Is there a risk that foreign investors will look at the ADGSM as an increase in Australia’s sovereign risk?

**Senator Canavan:** We have openly recognised the need to assure our export partners that we remain a consistent and stable supplier of resources. This was necessary action, in my view, to protect our domestic energy security. We did so in a way that was very mindful of the potential impacts on our reputation in the region. I’ve travelled through the region extensively, since that decision, putting to bed any fears and explaining the reasons behind it. I think, when you have that opportunity to explain it to our customers, it is very well understood, and it hasn't been a cause for any significant degree of longstanding concern from our export partners.

**Senator Gallacher:** We go to another matter of contention, a media release by yourself on 1 July 2017:

Securing our domestic gas supply should also put downward pressure on the price paid by Australians...

Yet in March 2019 the ACCC chair, Rod Sims, told a gas conference:

… current wholesale gas prices remain two to three times higher than historical prices.

**Senator Gallacher:** Are both those statements correct?

**Senator Canavan:** They’re consistent. I might just take a little while there. The historical price, without trying to verbal Mr Sims, the metrics or multiples he’s using there—what he’s referring to is the prices that prevailed before the establishment of an export industry in Gladstone. This was also at the time when our major source of supply in eastern Australia, Bass Strait, was still firing at very strong, well-producing levels. So prices were in the range of more like $3 to $5 a gigajoule. You’d be going back six or seven years or so.
As I've indicated before, they've been around $8 to $10 a gigajoule in the past year, so they are in that two to three times, as Mr Sims indicated. But they got up to a level of over $10 a gigajoule. Indeed, in early 2017, I think for the first three months of 2017, it was about $10.50 a gigajoule, from memory. So they've come down about 20 per cent, from that level, over the last 2½ years. But there has been that ramp up.

As Mr Butler has expressed, people knew at the time, when the export industry was established in Gladstone, that it would link our gas markets to the world and that it would potentially cause our price to increase to a parity level with the world. But there wasn't really an assessment on what it would mean for our energy security domestically, and that's what we've been trying to correct in the past couple of years.

**Senator GALLACHER:** Do you think the ADGSM has achieved its stated goals in regard to supply and price?

**Senator Canavan:** Because we've got a review ongoing, I don't want to pre-empt outcomes apart from just repeating what I said before. It certainly, in my view, had an impact. It's helped bring down prices and turn around that shortfall position we faced a couple of years ago, and that's the result of external reviews, or independent reviews, by the ACCC and AEMO. I should say that they're not really reviews of the ADGSM, but independent assessments of domestic gas markets by those organisations.

It's made an impact. We never presented it as a solution to all the issues that exist in the domestic gas market. One thing we haven't mentioned yet is the continuing restrictions on gas supply, particularly in southern Australia, in New South Wales and Victoria. It is a real risk, particularly to our medium- to long-term gas security. There is a real risk if we want to just rely on Queensland gas to prop up the rest of Australia—as the Victorian government seems to want to do. Queensland's a long way from Victoria. It costs a lot of money to transport gas long distances, and that is going to put Victorian manufacturing at a disadvantage unless they can sort their supply situation out.

**Senator GALLACHER:** On that, and this is my last question in this area: what regulation or investment could you initiate to increase competition and transparency amongst gas pipeline owners?

**Senator Canavan:** That's a very good question. It is one more for the Department of the Environment and Energy. But given my involvement more broadly, I'm able to shed some light. At the same time we did these other things with the ADGSM, one parallel track of changes was to increase regulation on pipeline networks. That was taken forward by Minister Frydenberg at the time, and is now the responsibility of Minister Taylor. That has led to the establishment of an arbitration framework for gas pipelines. Parties now can seek the ACCC's involvement to negotiate a price and access if they have difficulties. There has also been related transparency reforms about posting more information on prices, on flows and on pipeline availability to help try and create more of a liquid market in our pipelines. There's no doubt that, as I mentioned, it is a big cost. It's about $2 to $3 a gigajoule to take gas from Queensland to somewhere in southern Australia. That's a big chunk of the final price.

**Senator SINODINOS:** Can I just jump in there for a sec? Building on Senator Gallacher's point—what about building more pipelines across the country? That's been raised by some groups.
Senator Canavan: It's been a positive development in the past 12 months that we've had the Jemena pipeline commissioned. That now connects, for the first time, Darwin to eastern Australia and southern Australia. It's a pipeline from Tennant Creek to Mount Isa. There has not been a lot of other major pipeline activity in southern Australia at this stage. It tends to rely on the development of new resources so that's why it's so important to get projects going like Narrabri in New South Wales, which will coincide with an additional pipeline—potentially a different route to get gas from Queensland and NSW. That could save money so that is important.

There continue to be plans to expand pipelines in northern Australia to bring gas potentially from the Northern Territory, if the Beetaloo Basin gets going—a bigger pipeline than the existing one that has just been commissioned—and also from the Galilee Basin in Queensland. We're very supportive of those. They are potential projects that could see the support of the Northern Australia Infrastructure Facility. I'm sure Senator Watt would love to see that. We're there ready to support those. They do depend a little bit on getting resources; there's no point in building a pipeline unless you've got the resources to take. That's the chicken and the egg there.

CHAIR: But I was told by industry sources that significant lengths of pipeline would be cheaper to—

Senator Canavan: We're possibly talking about two different things. The government doesn't have a position on how best to transport gas from point A to point B. That's best left up to those who have more experience of that. As I consistently say: I don't care how the gas goes from point A to Point B, as long as it's the cheapest way. If shipping can do that in a cheaper way, that's all the better.

Senator PATRICK: You've got to remember: he's from Western Australia.

Senator Canavan: I was going to come to that. That almost certainly would be a consideration, if you're looking at taking gas from the North West Shelf or somewhere in Western Australia over to the east coast. We're not against an east-west pipeline, if someone can make that stack up. We did a cost-benefit study on it a few years ago, and it showed that it would be challenging but shipping may well be very competitive there. Look, there does seem to be at least an in-principle case for pipelines from, say, the Beetaloo Basin in the Northern Territory to the east where it's a bit closer and you've got significant gas demand in places like Mount Isa or Phosphate Hill, not far from Beetaloo Basin.

Senator GALLACHER: Chair, I've got many more questions in resources.

Senator Canavan: Was that: you've got no more questions?

Senator PATRICK: I've got some ADGSM ones.

CHAIR: We've got some requests to move to the National Offshore Petroleum Titles Administrator. Is that where you want to go?

Senator PATRICK: I just wanted to do some supplementaries actually, first, just on the AGDSM.

CHAIR: Do you want to do a couple of supplementaries and then we'll move to the titles administrator?

Senator PATRICK: Yes, happy to do that too. Minister—
CHAIR: We'll do supplementaries then we'll break.

Senator PATRICK: Why, when Gladstone was developed, wasn't a policy put in place to reserve gas for Australians?

Senator Canavan: Look, I wasn't the minister at the time, but I have said, and I'll just repeat it, that at the time there was no aggregated or consolidated assessment of the impact of those projects on the domestic market. The approvals of those projects occurred at federal and state levels and were centred around the normal things you do with major projects: environmental planning—

Senator PATRICK: Which government was in power?

Senator Canavan: It was the former federal Labor government when it was assessed, but it was a combination, I think, in Queensland of different things—every now and again I do switch into partisan mode, Senator Patrick, on these issues. As I just said, I changed my mind on these issues. We're just trying to fix them now so that's our frame of mind.

I've accepted that the situation in the west works, so let's see what we can do here in eastern Australia. I should stress though that we're looking to do these things prospectively in terms of a reservation policy. We made certain decisions and had a framework in place that attracted that investment in Gladstone. We may have taken steps we could to correct that in the last couple of years, but we've got to be mindful of the investment situation and keeping security of that as well.

Senator PATRICK: Prior to the ADGSM being brought in in 2017, I see to recall, certainly in South Australia, we had gas companies that couldn't get an offer. After the ADGSM, that doesn't seem to have occurred and so the supply issue seems to have gone away. Is that your experience around the country, Minister?

Senator Canavan: I was relaying some of that before that that's certainly what you see from the ACCC reports. I've certainly heard the same things anecdotally, but the ACCC has access to a broader range of confidential information. That's certainly their assessment, notwithstanding that prices remain higher than they were—at least for now there tends to be gas available.

Senator PATRICK: You say that it was successful and now you're going to review it again to get an even better situation?

Senator Canavan: Yes, although I will just put a caveat on: there's only so much, I think, the ADGSM can do on its own, particularly given the issues I mentioned before. The ADGSM looks at gas and the related heads of agreement which provide that those producers that are exporting from Gladstone offer uncontracted gas to the domestic market first. Almost all of that gas is in south-west Queensland, and so it's not necessarily an overly affordable solution for some consumers who are 1,000 or 2,000 kilometres away from that location. To deal with that issue long-term, we do really need to try and develop additional supplies of gas in southern Australia.

Senator PATRICK: Thank you.

CHAIR: We will now suspend.

Proceedings suspended from 21:04 to 21:16
CHAIR: We will resume this hearing. We are still in program 2. I believe that Senator Patrick wishes to discuss the National Offshore Petroleum Titles Administrator.

Senator PATRICK: That's correct, and I see that Mr Waters is here, so that's good. Good evening.

Mr Waters: Good evening.

Senator PATRICK: Firstly, I want to go to an answer I got from the foreign affairs minister to a question in relation to development on the southern plateau of East Timor. The response I got from the minister was: 'Australian officials from Export Finance Australia, the Australian Infrastructure Financing Facility for the Pacific and the National Offshore Petroleum Titles Administrator have visited Timor-Leste for discussions with TIMOR GAP on its infrastructure plans. The officials offered to provide advice on Australia's experience in developing LNG projects.' I presume you're aware of that visit by NOPTA to East Timor?

Mr Waters: Yes. One of my senior geologists made that visit to provide technical advice to the delegation.

Senator PATRICK: Does that mean they talked to the East Timorese regulator?

Mr Waters: I haven't received a briefing on the visit. It was under the auspices of the Department of Foreign Affairs and Trade. I was simply requested to provide technical support in the form of one of my geologists, and that's what I did. But, again, I did not receive a briefing on how the trip transpired. I do know that it was delayed for a couple of days or so. But who they met with and who they spoke with, I would have to take on notice.

Senator PATRICK: Approximately when was it?

Mr Waters: About a month ago.

Senator PATRICK: Okay. If you wouldn't mind taking on notice—

Mr Waters: I'm happy to do that.

Senator PATRICK: who they met with, the basics of the discussions and what NOPTA provided in respect of the visit—and any questions they may have come away with that you're also assisting them with and so forth.

Mr Waters: Sure.

Senator PATRICK: I'll just move to a question I asked of the minister before. Actually, maybe just more generally: what happens in situations where there is a maritime boundary change—obviously, there has been one recently—between Australia and East Timor in circumstances where there's a change in title area? How do you handle that?

Mr Waters: We are downstream of the actual activity. After we're advised as to what changes have been made we will then update the titles register to reflect the new title arrangements in terms of geographical location, specifications, latitude and longitude, and update our register accordingly.

Senator PATRICK: Who directs you to do that? In the case of the East Timor maritime boundary negotiation there were a number of parties, a number of companies, who had oil and gas titles—

Mr Waters: Yes.

Senator PATRICK: Does foreign affairs direct you?
Mr Waters: Not foreign affairs; officials from the department—

Senator PATRICK: From the Department of—

Mr Waters: from the Resources Division. They convey to us the details of the changes as to the boundary—the legislative changes—and then we update the titles register accordingly.

Senator PATRICK: But in some respects it's a property right that belongs to somebody else. It's a right that exists for someone who holds the title; you can't just change that, can you?

Mr Waters: The negotiations and all of the discussions and meetings that took place along the lines you've said were between officials from East Timor; officials from Australia, from a variety of departments; and all of the companies and joint venture partners et cetera affected and who are all involved in those activities. Again, NOPTA was not involved in that.

Senator PATRICK: So you haven't had any discussions? I'll just refer to a couple of production licenses—AC/L5 and WA-18-L—which exist at Laminaria-Corallina. They're licenses which belong to Northern Oil & Gas Australia. You didn't have any conversations with them? Someone just came along and told you to change those titles?

Mr Waters: We were advised through channels about the maritime boundary changes and, following the legislation, we then updated the register accordingly. We're advised through a process, and my role is simply to maintain the accuracy in the titles register.

Senator Canavan: I might just add—and Mr Waters might correct me if I'm wrong—that I don't believe NOPTA were heavily involved in the consultation at all. The consultations were with potentially affected parties and/or the negotiations with Timor-Leste over the new treaty. Officials from my department, though, were heavily involved; obviously mainly in consultation with the Department of Foreign Affairs and Trade. They have held regular discussions with potentially affected parties, working through with them what the impact might be. If that's where your questions are going, it might be best to—

Senator PATRICK: I did ask Ms Schofield to be here but, unfortunately, I think she's not—

Senator Canavan: I think she's not here this evening, but we do have officials.

Senator HANSON: I'm heading down the same path as Senator Patrick, if he doesn't mind me asking a few questions in regard to this.

Senator PATRICK: Can I just ask a couple more first?

Senator HANSON: Yes.

Senator Canavan: What I'm saying is that because this is all together we could have those officials at the table at the same time.

Senator PATRICK: Sure, that would be good. Why don't we do that?

Senator Canavan: Then we can try to answer your questions in substance.

Senator PATRICK: You'd be aware of the nature of the titles and the resources associated with them, I presume, Mr Waters?

Mr Waters: Yes.
Senator PATRICK: Did some of the Laminaria field on the Timor side of the maritime boundary contain a resource? Are you aware that on what is now the Timor side of that field—

Senator Canavan: I might just start by adding—and, again, Mr Waters might correct me—that NOPTA are not primarily responsible for assessing resource potential—

Senator PATRICK: He just told me he had knowledge of—

Senator Canavan: Yes, that would be more if there were production already—NOPTA would have that knowledge. But in terms of potential resources, that would be more Geoscience Australia.

Senator PATRICK: NOPSEMA looks after licensing arrangements and you're solely responsible for titles—

Senator Canavan: Yes.

Senator PATRICK: and titles are fundamentally over resources.

Mr Waters: Yes.

Senator PATRICK: So you said that you have some knowledge; I'm wondering if you could answer the question, please?

Mr Waters: While it's true that the titles you've been referring to have changed because of the treaty and the change in the maritime boundary, and while it's true that part of those titles are now within the Timor-Leste jurisdiction, that does not necessarily mean that any part of the field has crossed as well. However, because of the confidentiality provisions regarding resource management, I cannot be more specific than that.

Senator PATRICK: Okay. You will be aware that the inquiry powers of the Senate come from the Constitution, so they override confidentiality provisions in legislation. Basically, secrecy provisions in legislation are subservient to the inquiry powers of the Senate, so I wonder if there is some way perhaps we can take on notice.

Senator Canavan: I am more than happy to take it on notice. I would say that obviously some of these matters might go to jeopardising the commercial interests of the Commonwealth, given they are resources that we own, but we are happy to take it. It also involves negotiations with other countries as well, so we want to make sure we get the right information to you, and we are happy to take them on notice.

Senator PATRICK: You did also say that Geoscience Australia were the best people to ask.

Senator Canavan: I'll take it on notice and come back to you from all areas of the department with the information we can. Maybe if you could repeat the question?

Senator PATRICK: I'm interested in this: is some of the Laminaria field on the Timor-Leste side of the barrier? So are there resources crossing into that side of the boundary? It raises another question, Minister.

Senator Canavan: I am happy to table this information as well. Unfortunately, it doesn't identify on this map all the fields that you are referring to. It does have them there, just not all the codes you had. It shows the changes in the map.

Senator HANSON: Minister, I might be able to help you.
Senator Canavan: Yes, that looks similar.

Senator HANSON: I have a copy, so the members here can have a look at what we're talking about.

Senator Canavan: There is a document here that explains the impact on existing projects. I might table that at the same time.

Senator HANSON: If the secretariat could hand these out to the members then the will know where these questions are going to go. I would like to ask a couple of questions, if I may.

Senator PATRICK: I just have one final one for the minister and then I will hand it back to you.

CHAIR: Senator Patrick does have the call, Senator Hanson. We will come to you.

Senator HANSON: We are heading down the same path.

Senator PATRICK: I just want to understand. The Liberal National parties are the parties of property rights, so I know you will be sympathetic to this view. If an entity owns or has a right over a property, and it's clear in this instance that through negotiations between two sovereign nations, the character of that right has changed; there has been a reduction in the area. My understanding is it's an 18 per cent reduction, is that right?

Senator Canavan: I'll take the details on notice.

Senator PATRICK: But there is clearly a reduction because if you look at the line—

Senator Canavan: We'll take the details. As Mr Waters said, the actual area that is a title is not necessarily the same area that the resource is located in—that is, the hydrocarbon resource. So we'll take it on notice and come back to you.

Senator PATRICK: The general principle would be the Commonwealth, because if actions carried out under constitutional powers reduces the property right of somebody, has to provide just compensation?

Senator Canavan: I can't answer that question, so we'd have to take that on notice given it goes to something the Attorney General's would probably have to advise on. We'll take that on notice.

CHAIR: Minister, is it okay for these to be tabled?

Senator Canavan: You can table those, yes.

Senator PATRICK: Maybe we'll flick to Senator Hanson then come back to me for some supplementaries.

Senator HANSON: I'll put this into perspective. The treaty between Australia and the Democratic Republic of Timor-Leste establishing the maritime boundaries in the Timor Sea came into force on 13 August 2019. The joint authority can cancel a production licence in whole or in part if certain conditions are met, but none of those appear to apply in relation to the changes made by the treaty. So my question is: under what provisions of the legislation can production lease WA-18L be amended showing the loss of the area given to Timor under the treaty?

Senator Canavan: My officials will correct me if I'm wrong, but the changes to these areas subsequent to the conclusion of the treaty were the subject of legislation that went
through the parliament. So my understanding is that those changes were made in that legislation that was supported by the parliament.

**Senator HANSON:** You're saying it all comes back to the treaty. So how will you ensure that Western Australia-18L production lease reflects the area lost to Timor?

**Senator Canavan:** You mean, under the new rule, they have adjusted it.

**Senator HANSON:** So they've lost that area to Timor. I have it here if you would like it. Do you want a copy of it?

**CHAIR:** We are just getting copies made.

**Senator Canavan:** I am familiar with the area that you are referring to. As I said, the changes in those titles were embedded in legislation that reflected the new negotiated treaty with Timor-Leste.

**Senator HANSON:** I'll just refer to this. The Laminaria lease WA-18L is cut by the line TA-1, TA-2 in article 2 of the treaty, giving Timor 18.5 per cent of that production lease. The current owner of the lease has been offered a lease from Timor but not on the same terms. So my question is: what compensation is available to the owner of this lease?

**Senator Canavan:** I will ask officials to provide whatever information they can, but I'm probably more likely given it goes to a specific field, to take that on notice and come back with all the information we can. Is there anything we can add?

**Senator HANSON:** No.

**Ms Illman:** The treaty includes transitional arrangements to provide business continuity specifically under article 22 of the Timor Sea Treaty and under article 27 of the International Unitisation Agreement that current petroleum operations will be preserved through ensuring conditions or terms equivalent. Similar protections are provided for in the transitioning petroleum operations from Australia to Timor-Leste.

**Senator HANSON:** The lease is still valid so it wouldn't be—

**Ms Illman:** Yes.

**Senator HANSON:** I am pleased that you think that. Under article 3, the adjustment of the continental shelf, Timor-Leste and Indonesia agreed to an end point to their continental shelf boundary, west of point A17 or east of point A16 on the 1972 seabed treaty boundary or on the latter changes to—that's only on geographical changes—the commercialised depletion of the Laminaria and the Corallina fields. So they're still valid under the treaty only if the depletion has finished. So they cannot be shut down is my understanding upon the entering into force of an agreement between Timor-Leste and Indonesia delimiting the continental shelf boundary between those two states. So my understanding is that, under the treaty, that lease agreement cannot be shut down. It's still valid. Unless you can direct me to something totally different to what the treaty says, it says the 'commercial depletion of those two fields'. So what you're telling me is, although the boundary has been cut, another agreement for the 18.5 per cent has gone to East Timor, which is nowhere near what he was able to get out of it under the ownership of the Australian. He was not dealt with, he was not consulted—nothing whatsoever—and you have actually sold that part to Timor for no compensation.

**Senator Canavan:** I will just be very clear about that point. I don't want to go into individual cases too much, but I will come back on notice.
**Senator HANSON:** There is only one case up there.

**Senator Canavan:** All title holders were extensively consulted with. They continue to be consulted with. We continue to have month-to-month meetings through this transitional period with affected title holders, so that is not correct that people were not consulted with. I have spoken to those affected people myself, so I am aware of these issues. We have those transitional arrangements in place and we will come back to you on notice with the specific changes. I would just stress that other point that Mr Waters made—there is a distinction between the geographic area of a title on a map where the resource within that title is and how that might affect a division of resource between two countries or two jurisdictions that straddle a particular title area. There are two different things. There is the area that they have the and the underlying resource—the oil and gas basin that's in that. They are two different areas.

**Senator HANSON:** I know they're two different areas.

**Senator PATRICK:** Just on what you said before, you talked about equivalent terms. Are you able to advise whether Northern Oil and Gas Australia were issued equivalent terms in the PSC on the Timor-Leste side of the border?

**Senator Canavan:** I will ask officials. I think that's still under consideration, but I will ask officials to provide any updates.

**Ms Illman:** Yes, we understand that the production-sharing contracts were offered on equivalent terms.

**Senator PATRICK:** I had a talk with the CEO of that company. I was in Dili for the popular consultation and went down to their facility, and he is definitely of the view that's not the case. So the minister just indicated there were perhaps some negotiations continuing. Are you suggesting the matter is finalised?

**Ms Illman:** On 28 August, six new production-sharing contracts between Timor-Leste and the affected petroleum operations were signed in Dili together with a range of other documents that give effect to the transitional arrangements.

**Senator PATRICK:** But that doesn't say they were done on equivalent terms.

**Ms Illman:** But they were signed.

**Senator PATRICK:** I understand that but that doesn't mean they were signed on equivalent terms.

**Ms Illman:** I would expect that a signatory to a production-sharing contract would be accepting the terms.

**Senator PATRICK:** Well, it depends on whether—

**Senator Canavan:** Let's take that on notice because the question goes to a specific area. I'm not familiar with where that's up to. We will take it on notice. A part of your question goes to a matter of judgement to some degree. We are confident with the provisions we have struck with the Timor-Leste government will be adhered to, but we will come back on notice to this particular question. We're happy to provide briefings and some of these matters will be more easily discussed in camera, given they go to an individual title holder. I'm happy to provide that and come back.
Senator PATRICK: I will acknowledge your office did offer me a brief but it was a bit hard. I guess part of the concern here is—some of this will get drawn out with NOPSEMA—we have got an Australian company that has now gone into voluntary administration, which is never a good thing. It is one of the few companies we have working on the southern plateau. If it were to shut down, all that would remain are the Chinese and the Indonesians because we don't have much in the way of presence there, having been there and having had a very good look around. There is a national interest prospective to this as well. Are you considering that in the context of any discussions that you're having? I know you are having discussions. You have had some phone calls.

Senator Canavan: There are different matters here that you've raised. Some of these go to NOPSEMA which is on later this evening. To deal with the matter you have raised very briefly here, the application of the NOPSEMA's powers, in particular the protection of the environment and safety of people, is not subservient to any other consideration; that is a primary consideration, particularly the safety of workers on our offshore oil and gas platforms. That must be protected and of course our environment as well is of incredible importance. So, NOPSEMA will be able to take it further. What I am really here dismissing is we're not making decisions on these matters. NOPSEMA is certainly not saying, 'Well, they are an Australian company so they deserve an easy touch.' The regulation must be applied.

Senator PATRICK: I wasn't going to the state of Northern Endeavour at this point in time. I am sure we will talk about that. I was going to the fact that there are operations on the southern shores of Timor and that's a good thing in my view from a strategic perspective and from assistance to Timor. In this instance, there may have been a loss of right. There may have been loss of taxes paid that could materially affect this Australian company. I say there is a national interest element to this. The big concern with this big company shutting down is, I am sure you are aware, the significant refining capability on their vessel. Once again, I am not talking about the vessel yet but the capability of the company is of great interest to Australia from a field security perspective, which is where I initially approached this from.

Senator Canavan: As I indicated, I am not trying to comment too much on the individual case, because they are matters for the appropriate regulatory authorities to take into account. All I will say is, don't accept the characterisation earlier in the question that we haven't been acting in our national interest.

Senator PATRICK: This maybe a question for NOPSEMA. I will take your guidance on this, Minister. In circumstances where the company is in voluntary administration, but may switch to liquidation—I am not suggesting that is the case, but it is a clear possibility—who takes care of all the decommissioning costs?

Senator Canavan: We might wait for NOPSEMA is here.

Senator PATRICK: That's a NOPSEA question?

Senator Canavan: Obviously, I have been briefed on these matters, but we will do that in that section.

Senator PATRICK: Thank you.

CHAIR: Shall we move on to more the northern Australia component of this outcome. Let's try to finish 2.4 if we can.

Senator Canavan: Is NOPTA dismissed? Any questions for NOPTA?
Senator PATRICK: How are you going with the 'use it or lose it' review that you were undertaking a year or so ago? Remember, there was a review done off the North West Shelf?

Mr Waters: Yes.

Senator PATRICK: What was the outcome of that review? Did we end up getting any new entities involved in taking over a lease and going down the production path?

Mr Waters: The review is complete—the North West Shelf commerciality review of the 10 retention leases that we examined. As a result of that review and briefing of the joint authority ministers, we have had a significant increase in engagement with the joint venture partners and there have been very encouraging signs showing that a number of the retention leases are moving towards a commercial outcome.

Senator PATRICK: That's staying in the same hands, but in some sense—

Senator Canavan: Yes. Just to be clear—correct me if I'm wrong, Mr Waters—in the Southern Basin we have rejected a number of retention leases, because obviously we felt there was no cause for that.

Senator PATRICK: Can you put some detail on this?

Senator Canavan: We will take it on notice. There were three, I'm told, but we'll come back to you with which ones we did. In the North West Shelf or the Carnarvon—really, the Carnarvon and Browse basins—there has been no change of ownership, so to speak, of the titles, but there has been significant movement and development on bringing forward projects such as the Browse Basin joint venture and Scarborough. We remain hopeful that something will move forward further in the next few months. There is a great alignment here between myself and Bill Johnson, the Western Australian minister. I was in Perth only a couple of weeks ago discussing with all the joint venture partners and related entities how important that project is and that we expect it to come to production sooner rather than later.

Senator PATRICK: So, no change in title, but a change in attitude—

Senator Canavan: Well, yes—look, they have rights. It was never an intention to interfere with rights here. They have a right to develop those retention leases. The Browse comes up 30 June next year and Scarborough towards the end of next year.

Senator PATRICK: I would love it if that philosophy were in place for NOGA! Is that report public or confidential?

Mr Waters: No.

Senator PATRICK: Is it possible to provide a desensitised—

Senator Canavan: We will see what we can provide on notice. Obviously, a lot of the information in that review is commercial in confidence. We will see what we can provide.

Senator PATRICK: I accept that, but a desensitised summary of what was in the report?

Mr Waters: We will endeavour to do that.

Senator Canavan: We will look at that.

Senator GALLACHER: You mentioned Scarborough. It appears as if one operator is carrying the whole load forward and another operator is sort of hanging back a touch.

Senator Canavan: It is not for me to comment on commercial negotiations.
Senator GALLACHER: I understand that. But what do you do? Do you just assess the title holders and assess their intentions and provide advice to the minister? Is that correct?

Mr Waters: There is one operator for the Scarborough project and we are in very close contact with the joint venture partners on their progress. The operator is carrying forward a range of activities and, as publicly announced by the CEO, they are financing that part of the activity.

Senator GALLACHER: But one of the problems in this space really is that there is no incentive for some people to do anything other than hang on and let someone else be the early mover.

Senator Canavan: Not necessarily, because they only have the opportunity to move on for a limited period of time, unless we provide a further retention lease. In the case of Scarborough, I'm informed that their lease exists for the current joint venture until late next year. They have the right to reapply to maintain that lease or tenure, but there is no obligation on the government to provide it, of course. So, they have an incentive to potentially bring that to development within their lease tenure or there is some uncertainty and they may not be able to continue there. That's what we're really doing. We are trying to make clear the government's priorities and objectives here and make it very clear to the owners of these titles that in most cases we expect production to occur sooner rather than later.

Senator GALLACHER: In this case the media commentary that I have seen is that the job could go to a bigger and more complete stage with other partners who are prepared to stump up and get involved, whereas one holder is not doing that: BHP.

Senator Canavan: It is not unusual for companies to struggle to cooperate. That happens. But what I would say on Scarborough and Browse is that there have been very positive developments in the past year. Things are moving forward. We are coming to critical times, though, in the next few months and we're doing everything we can to get that cooperation agreement and to secure investments, particularly for Western Australia. Their leases are so large they will be very beneficial for the whole country.

Senator GALLACHER: It was your side that brought in the 'big stick' philosophy. Do you have a big stick? Can you make that work?

Senator Canavan: I'm not going to characterise it in those terms, but I have not been reticent from making it very clear that we will not automatically be granting retention leases. I will be applying offshore petroleum and gas arrangements consistent with the legislation passed by this parliament. There are limited circumstances in which retention leases can be provided if those circumstances are not met. We expect the title holders to either go into production or give someone else a go.

CHAIR: There being no more questions on NOPTA, go with our thanks. Before the next item, I will formally table two documents from Senator Hanson, one being a map with the Joint Petroleum Development Area in its centre, and the second being a conceptual overview of Laminaria-Corallina. And from the minister we have a DFAT document headed Australia and Timor-Leste maritime boundaries and a Geoscience Australia map of the Laminaria-Corallina. There being no objection to the tabling, it is so ordered.
Senator GALLACHER: Given the difficulties we faced around the gas reservation and those issues, what actions can you take to encourage the development of gas fields and mines where the approval is a state matter.

Senator Canavan: Obviously it is primarily a state manner. We have been doing what we can verbally to encourage those states to develop their resources, to convince them of the benefits to themselves and the country of doing so. One thing we started to get into before was that we are seeking to develop a national gas reservation scheme. I am seeking to do that in close consultation and cooperation with the states. I have spoken to all the resource ministers to start to develop that. Maybe that is one pathway where we can encourage states who are not otherwise open for business at the moment to open up their doors, because we will be there to help them and support them to make sure that any new development that occurs can deliver domestic benefits, domestic gas, and support domestic and Australian jobs.

Senator GALLACHER: So, you would like a national gas reservation, but approval for gas fields and mines is a state manner?

Senator Canavan: This is just to do with gas. We are not envisaging covering mines.

Senator GALLACHER: So you can only encourage, really?

Senator Canavan: That's right, at a Commonwealth level. The power is with the states. We're trying to take a carrot approach to encourage them to do the right thing.

Senator GALLACHER: What about an onshore gas production facility in New South Wales—for example, at Narrabri?

Senator Canavan: We're very supportive of the Narrabri project. The approval for that remains at the NSW level. We've simply been encouraging the NSW government to make a decision on that approval as soon as they can. If it came into production, that project alone would meet about half of NSW's gas demand.

Senator GALLACHER: Minister, your attitude to environmental activists is well-known. I refer to an opinion piece in the Australian in February this year where you called activists the 'new colonialists'. I must read that one—I haven't read it.

Senator Canavan: I think you'd like it, Alex!

Senator GALLACHER: Have you used your position to challenge the ability of activist groups to spread misinformation and raise money from those efforts?

Senator Canavan: First of all I don't have any issue with people expressing their own views and opinions or protesting, as long as it's within the law. However, equally, I have the right to put my own opinions and views, and the position and views of the government, in contrast to those views and positions. There are no restrictions on people in this country expressing political views.

Senator PATRICK: Is this the Green Shirts thing?

Senator Canavan: Green Shirts? No that's—

Senator WATT: They're the 'okay' activists.

Senator PATRICK: Apart from their fashion sense!

Senator Canavan: My particular concern in the article you referred to was that many of these activists are purporting to represent the views of local communities and sometimes
Indigenous groups, but they are not often an accurate reflection of those underlying views. In the article I was particularly referring to the case of the Wangan and Jagalingou peoples, who are the peoples where the Adani Carmichael mine is. They voted 294 to one in favour of the mine, yet there are still activists that run around and spread misinformation that somehow the Indigenous group, the W and J people, are against the mine as a whole.

Senator GALLACHER: So basically you just speak out about it and write opinion pieces and do whatever you can?

Senator Canavan: I don't intend to change my methodology, because it seems to have been quite effective so far.

Senator GALLACHER: Have you investigated the terrible taxation status of—

Senator Canavan: Before I was a minister it was a focus of mine. I encourage other senators with time on their hands to look at these areas. Before I was a minister, yes, I was involved and I made a submission to a parliamentary inquiry, a House of Reps inquiry, on deductible gift status for environmental groups. That report made a number of recommendations that were quite consistent with my submission. I believe the government still has a discussion paper out on this issue, but that's a matter for the Treasury.

Senator GALLACHER: There have been a number of issues papers on a national hydrogen strategy. Responses for the nine issue papers were only open for 28 days between 1 July and 28 July. Was that sufficient time for the industry and the general public to respond to such a large amount of information?

Senator Canavan: It's a shame, because that probably would have been best put to the Chief Scientist, who is managing that process. The nine issues papers are all from his COAG working group.

Senator GALLACHER: We can put them on notice to Dr Finkel.

Senator Canavan: We might take those on notice.

Mr Lawson: We've got a very large number of very good submissions in from stakeholders.

Senator GALLACHER: Sixty-one submissions.

Mr Lawson: They were of a high quality.

Senator GALLACHER: There are 61 submissions on the website. How many submissions were marked private or not for publication?

Mr Lawson: I'd have to take that on notice.

Senator GALLACHER: Australia and the US will pursue a joint strategy on rare earths and other mineral deposits that are vital to national security in a bid to open up a concentrated market that's currently dominated by China. How much is the US looking at investing in Australia? Is there a figure?

Senator Canavan: There's no figure at this stage. We've been working with the United States for well over a year now to promote our opportunities in this country. In late 2017, a directive was given to the United States Geological Survey to compile a list of minerals critical to the US economy. We identified that as an opportunity for Australia and have been promoting the fact that we are, from memory, in the top five producers in the world for 14 of...
those 35 minerals. Last year we signed a letter of intent with my counterpart in the United States, the Secretary of the Interior. It has been developed into an MOU between the United States Geological Survey and Geoscience Australia, which was mentioned earlier this evening. As you probably saw during the Prime Minister's recent visit, there's a commitment to work on a joint action plan to secure supplies of those minerals. We have not yet got to the stage where we've signed on the dotted line, but we're making good progress and are continuing to have constructive discussions.

Senator Gallacher: Do you expect a US government contribution, or is it private sector?

Senator Canavan: I'm interested in outcomes. I can't speak for the US government, but we are considering what the Australian government can do to assist and support developments in this space. As you mentioned, some of these minerals—not all—exist in quite concentrated markets, which lead to high barriers to entry, and there is a possible role for governments to tackle that market failure.

Senator Gallacher: Have we put any new money up, or is it just existing—

Senator Canavan: Earlier this year we released a critical minerals strategy on behalf of the government. It focuses on three areas: infrastructure, innovation and investment. The infrastructure piece is saying that some of these opportunities exist in quite remote areas of Australia that lack infrastructure and need upgrades. Some of the Roads of Strategic Importance programs in particular are targeted at those. For example, the Mount Tom Price-Karratha upgrade is very much targeted at opening up opportunities in this space. The Northern Australia Infrastructure Facility has made investments in the Mineral Sands Project in the Kimberley region to help open that up as well.

In terms of innovation, we provided $25 million to the Future Battery Industries Cooperative Research Centre to particularly help support supply chain innovation. We certainly see an opportunity for Australia to develop more of the value-added components of the battery supply chain, particularly lithium. There are lots of opportunities in Western Australia, with some lithium hydroxide plants already being constructed. This CRC funding is particularly for how we can take further advantage of that. On the investment side of things, the Northern Australia Infrastructure Facility, as I said, has already looked at some projects. What we're focused on now with the United States is trying to unlock that investment and further development.

Senator Gallacher: So you expect there to be jobs out of this improving relationship?

Senator Canavan: Obviously any investment in the resources base will lead to employment and jobs. We should keep in mind that some of these resources are not particularly large commodities, in the sense of bulk commodities like oil, gas or iron ore, but they are very strategic and will generate a significant number of jobs.

Senator Gallacher: Is there an issue with sliding global prices for lithium?

Senator Canavan: There has been a significant decline in lithium prices, as you've indicated. It's an emerging market. It demonstrates some volatility. Our medium to long-term outlook for lithium remains very strong. I might ask Ms Bray to add to that answer.
Ms Bray: A recent surge in supply has seen the price of lithium hydroxide fall about 33 per cent, year on year, from US$18,000 a tonne in 2018 to around US$12,000 a tonne in 2019. Further falls are expected over the outlook period. Australian lithium production is expected to increase from an estimated 288,000 tonnes in 2018-19 to 358,000 tonnes by 2020-21 as the Greenbushes mine is upgraded and several new mines ramp up. Export values hit an estimated record high of $1.4 billion in 2018-19, but they are forecast to fall to $1.3 billion by 2020-21 due to lower prices. The present lithium oversupply is challenging, but the long-term goal of investment in new and expanded mines has been to position businesses to meet future demand.

Senator Canavan: Most of that information is publicly available in the Resources and Energy Quarterly publication and—surprise, surprise!—it comes out quarterly. We have recently—I think in only the last two years—added a specific chapter on lithium to that document, and that's updated every quarter. So there is lots of information there if you're interested.

Senator GALLACHER: Is this an initiative of Australia or the US or—

Senator Canavan: There are joint tracks here, if you like. As I mentioned before, the United States itself began a process to secure critical minerals for its economy. We had, of course, been thinking particularly about areas like lithium that show great potential for us. But, through discussions in the past two years, there's been a concordance of interest between our two countries. It's also been discussed with other nations as well. On a recent trip I made to Japan, Korea and India, all were interested in these types of emerging minerals and commodities that we have opportunities in.

Senator GALLACHER: Just to finish up, Minister, how many times have you been to WA since the election?

Senator Canavan: It would be possibly three. I was there only a couple of weeks ago. I was there for the Prelude. I think it's possibly three times since the election. I'll take it on notice, though. It's been a few times. I'm going back in a couple of weeks for these further discussions. I love WA.

Senator GALLACHER: Is that your normal schedule?

Senator Canavan: I don't know. As I say, I'd have to take it on notice. I am a regular visitor to the state, obviously, given the portfolio.

Senator WATT: Were these visits since the election just to Perth or other parts of WA?

Senator Canavan: No, other parts. Two weeks ago I was at Jimblebar, which is a mine near Newman. I do recognise that I haven't been to the Pilbara for a little while. I've been wanting to get back up there a bit. It's just hard, obviously, to get to all of these remote areas where our minds are. But it's a great industry and I try to get around as much as I can.

Senator WATT: How about the Northern Territory? How many times have you been there since the election?

Senator Canavan: I'll take that on notice. It's been at least twice, I think, since the election and, again, I am going back in a couple of weeks to Darwin.

Senator GALLACHER: Queensland?

Senator Canavan: Hard not to!
Senator WATT: I'm happy for you to spend less time in Queensland!

Senator PATRICK: I have some questions on waste management facilities. Minister, can I have an update on where things are up to on perhaps the court proceedings and what's happened since in relation to both Hawker and Kimba and the status of the—

Senator Canavan: I might ask our officials to update you on the matters in relation to the court. Since the committee last met, the action that was taken against the Kimba council on behalf of the Barngarla people was not successful, which has allowed the ballot process to proceed.

Senator PATRICK: Is that on appeal?

Senator Canavan: I might ask our officials to expand on that. I'll just go to the other part of your question. Since that case, we have reinvigorated the ballot process which was delayed by the court action. The ballot in Kimba is now open. It's due to close, I think, in two weeks time. So ballots are out. I think today there have been some figures published on how many ballots have been returned. But, again, I might ask officials to confirm those numbers. The Flinders Ranges Council ballot is due to open just after the Kimba ballot closes in about three weeks time on 11 November. There was a delay in opening the ballot for the Flinders Ranges Council because the council asked us to do some more work on risk assurance than we previously put out. We agreed to do that. That work is close to completion ahead of the opening of the ballot there. The ballot of the Flinders Ranges Council is due to return just before Christmas. So by the end of the year we'll hopefully have results from both communities. As I am sure you are aware, we are doing a range of other consultations and assessments of community views. Did you want the court case as well?

Senator PATRICK: I do. Will the AEC publish results separately?

Senator CANAVAN: Not long after all the ballots are returned a count will occur. That is managed completely by the Australian Electoral Commission. We don't have any oversight of that. My understanding is that the AEC intends to publish the results relatively quickly after the count. It's the same process as what occurred for the Kimba ballot previously, and the results there were known within hours. Is there anything that the officials would like to add?

Ms Reinhardt: We expect to have results within five days of the close of the ballots but they may well come sooner than that as well given that there is a fairly small number of votes. In terms of AEC vote counts, this is a fairly small number of votes that they need to count. So we may have them much sooner. The ballot in the Flinders Ranges is expected to close on 12 December. Again it will be five days but potentially less than that.

Senator PATRICK: And the court case?

Ms Reinhardt: As you possibly know, the court's finding was that the Kimba council had not done anything that was inconsistent with the Racial Discrimination Act.

Senator PATRICK: I have read the judgement, so I'm familiar with that. Has there been an appeal lodged?

Ms Reinhardt: There has been an appeal lodged. There has also been a request for an injunction on the ballot, which was dismissed. So the ballot will now go ahead, and the Kimba council is running their ballot as we discussed.
Senator PATRICK: Is the appeal to be heard by the Full Federal Court? It's a Federal Court matter, isn't it?

Ms Reinhardt: Yes.

Senator PATRICK: What are the legal costs for the Commonwealth to date in respect of the original matter?

Ms Reinhardt: From memory, around $800,000.

Senator PATRICK: Can you take it on notice to provide an exact figure. I presume all costs have been invoiced to the Commonwealth—or do they go to the council?

Ms Reinhardt: The Kimba council costs are covered by the Commonwealth.

Senator PATRICK: So they pay the legal bills and you have undertaken to reimburse?

Ms Reinhardt: That's right.

Senator PATRICK: And it is circa $800,000?

Ms Reinhardt: That is not just the Kimba council; that is the costs associated with the Commonwealth's involvement in the case—whether it is our own legal advice or reimbursed costs of the Kimba council.

Senator PATRICK: Thank you, that's good. What is the total amount the Commonwealth has spent so far in this process?

Senator Canavan: I think the figure we usually use is the costs, broadly, since the establishment of the current act. Like I said, we've been going for decades trying to find this. That is around $30 million to $40 million.

Ms Reinhardt: We'd have to take that on notice.

Senator PATRICK: What are the appropriations for this year and for the forward estimates?

Ms Chard: The amount that was included and published in the Cadence report was around $250 million. Sam might correct me if that's wrong.

Ms Chard: There were costs estimated in the Cadence Economics report which were early cost estimates based on a generic design, not a site-specific design. Those construction estimates were at $325 million. That included capital works of approximately $250 million for the facility and enabling works of approximately $75 million. But I should reinforce the fact that they were early estimates that were done on concept designs. We have done significant site characterisation work since then.

Senator PATRICK: What are the appropriations for this year and for the forward estimates?

Ms Chard: I can tell you the appropriations for this year. There are currently no appropriations specific to the project for the forward estimates because of the nature of the task force. The task force is currently funded year by year, as has been the case for the last number of years.

Senator PATRICK: So it is just out of an operating budget—is that how it works?

Ms Chard: No, there is an appropriation, but it's an appropriation year on year rather than a forward estimates appropriation.
Senator Canavan: Obviously that's because, depending on the results of ballots and decisions that might flow from that, the budget would change.

Senator PATRICK: Sure.

Ms Chard: Did you want me to answer the question on the budget for this financial year?

Senator PATRICK: Maybe on notice if you don't mind. Minister, if a site is selected, what was the question that was asked of the people voting?

Senator Canavan: It was a very simple question. You mean on the ballot paper?

Senator PATRICK: Yes.

Senator Canavan: I think it was something to the effect of, 'Do you support the construction of a radioactive waste facility in your community?' Is that broadly right?

Ms Chard: Yes.

Senator PATRICK: And have you advised the communities how that ballot will be assessed in the context of broad community support?

Senator Canavan: What we have said there is always the same: that the ballot will be one component of assessment of broad community support, seeking a significant degree of support across the community. We are assessing not just the ballot—

Senator PATRICK: What is significant?

Senator Canavan: As we have gone over many times, there's not a particular threshold here. We're not just doing a simple majority. Once you go away from that, there's no clear metric apart from that. Also, of course, we are not just looking at the community ballot; we are taking submissions from around the whole region, including those that might be outside the ballot area. We have obviously got to draw a line on the map for the ballot, but we're still considering views on the other side. We are taking place interest in neighbouring landowners around the site, so there is a separate process to assess that. We're looking at businesses and their support or otherwise, and of course at Indigenous community and traditional owners as well.

Senator PATRICK: Thank you. I will close by remarking that it's not the people who vote that count; it's the people who count the vote.

Senator Canavan: There is the independence and rigour of the Australian Electoral Commission.

Northern Australia Infrastructure Facility

[22:12]

CHAIR: Can we release 2.4? Okay. That is all of resources, but we still need Northern Australia, including the NAIF? We have all received and read the opening statements, so I will request that you table that in the interest of time. Thank you very much.

Senator Canavan: At the outset I thank Ms Walker for her service as the CEO of the NAIF. This will be Ms Walker's last appearance at estimates. She had the challenging task of bringing the NAIF into inception and getting it started, so I want to put on record our appreciation and thanks for that and wish her all the best for the future.

CHAIR: The committee joins in seconding those remarks. Senator Watt.
Senator WATT: Indeed. I'm happy to second those remarks as well. Best of luck in your next ventures, Ms Walker.

Ms Walker: Thank you.

Senator WATT: Since we are talking about this, I was actually going to ask for an update on the recruitment of a new CEO. Is that best directed to you, Minister?

Senator Canavan: Yes, it is best directed to me, although it's a matter for the board. It's well advanced. They have consulted me, but no decision has been finalised yet. We are expecting that very soon.

Senator WATT: So there have been interviews?

Senator Canavan: Yes. There has been a selection process, a search—all those sorts of things.

Senator WATT: I'm not going to ask you who it is, but we're essentially down to one preferred?

Senator Canavan: I'll just leave it that it's well advanced.

Senator WATT: It's pretty close; okay. What will be the office location of the new CEO once they're appointed?

Senator Canavan: Because it or the person hasn't been selected, I'll just take that on notice, but under the act the choice and decision of the CEO is a matter for the board.

Senator WATT: Will the new CEO be located in northern Australia?

Senator Canavan: As I said, that's a matter for the board. There is no restriction placed on that in the act itself. The decision is one of the board, so I'll take that on notice because we have an ongoing recruitment process in place.

Senator WATT: Okay. It won't surprise you that I do have a few questions for how the NAIF is going. At the outset, I want to check: there were some questions on notice I lodged about three to four weeks ago or maybe not quite that long ago. They were questions 870 to 899, about a whole range of expenditure to do with the NAIF. I don't suppose we have answers to those yet. I don't think they're overdue; I just thought I would check. I think they were asked to you, Minister.

Senator Canavan: I don't think they have been tabled.

Senator WATT: That's okay. As I said, they're not overdue; I was just going to see if any of them had come in. I notice that in the opening statement of Ms Walker we have up-to-date figures on how much the funds have been drawn down. and I know that on a regular basis, Minister, you talk about the investment decisions or, to put it another way, the approved projects for the NAIF. But this opening statement tells us that the NAIF fund's aggregate drawdown amount represents $44.68 million against the loan limits aggregating $51.48 million. Does that mean that, as we sit here today, only $44.68 million of NAIF funds have actually been drawn down or, to put it another way, released?

Ms Walker: Yes that's correct. Could I put that in context?

Senator WATT: There's a lot of context in your opening statement. It is the case that, four years after its creation, the NAIF has released $44.68 million.
Ms Walker: Well, it's the case that the borrower has accessed $44.68 million, and I think that's actually important. I'm glad that you are raising this issue, because I know you have been focusing on this lately. The drawdown of funds is absolutely at the discretion of the borrower.

Senator WATT: Yes. That's all set out in your opening statement.

Ms Walker: But also the process that we need to follow in order to get to that point where funds can be drawn down is also largely dependent on information being provided by the borrower. Our role is to make investment decisions based on information that's provided to us, and we've done that. We've had 12 decisions made since May 2018.

Senator WATT: Can I check this statement? The aggregate drawdown amount represents $44.68 million against the loan limits aggregating $51.48 million. Does this reference to loan limits aggregating $51.48 million mean that the particular projects that have begun drawing down funding could have been approved up to the value of $51.48 million?

Ms Walker: Yes. There are three projects that have reached financial close, and financial close is the point at which the money is then available to be drawn. So the limit for those three projects in aggregate is the $51.48 million, and then the amount that is then drawn down as it's required for construction is the $44.68 million.

Senator WATT: Yes. Minister, you might remember we had a bit of a conversation about this in The Morning Bulletin, a paper you and I speak to on a regular basis. I don't have the date of this article, but I'm sure you will remember it. I was talking about the limited funds that have been released from the NAIF, and your office in response provided the latest drawdown figures, which showed in total $51.48 million had been facilitated through NAIF between those three projects. But in fact it's not that $51.48 million have been released; it's actually only $44.68 million.

Senator Canavan: I'll have to have a look. I'll take it on notice and have a look. Maybe there was an error there. If there is, I'll correct the record.

Senator WATT: I work out that $44.68 million is slightly less than one per cent of the NAIF's $5 billion budget. Is that your maths as well?

Senator Canavan: That would be right. It's $5 billion.

Senator WATT: So after four years we've got one per cent of the funds in the NAIF actually going to projects.

Senator Canavan: I've always been up-front with the fact that it got off to a slower start than was expected. That's why we made significant changes to the investment mandate about 16 or 17 months ago.

Senator WATT: It hasn't exactly sped up the funding getting out the door though.

Senator Canavan: It has sped up the investment decisions. I was going to come to that.

Senator WATT: Maybe it's sped up the investment decisions—

CHAIR: Senator Watt, the minister has the call.

Senator Canavan: I was going to come to the fact that we are expecting in the next six to 12 months a significant increase in drawdowns, and I'm happy to run through or provide on notice the expectation of that on a project-by-project basis. As you'd expect, with what are
sometimes quite large projects there are gaps between when they receive financial approval, get FID and then start the project. Given that a lot of the investment decisions were made in the last 12 to 15 months, now we’re about to start the real kick-off of many of those projects that have been decided upon over that period.

Senator WATT: How many years do you expect it is going to take before all $5 billion in the NAIF is released?

Senator Canavan: We have a profile of that spending in the budget. I might ask the officials.

Ms Walker: We've also got the corporate plan.

Senator WATT: Obviously, at the current rate it’s going to take 500 years. I'm hoping it's not going to take that long.

Senator Canavan: As I said, it got off to a slow start. Because decisions have been made now, we expect drawdowns to pick up. The current legislative time frame for the NAIF of five years to mid-2021 is the time period for which investments can be made or investment decisions can be made. Obviously, we will review the NAIF before that time. That's the time period that investments can be made. Post that period, drawdowns/loans can continue to be administered and spent. In just over a year $1.4 billion has been approved. If we keep that pace up, we're going to get very close to, if not exceed, the $5 billion.

Senator WATT: I'm not disputing that there's quite a large number of projects that have now reached the investment decision phase. The issue now seems to be about actually getting money out the door.

Senator Canavan: I don't accept that there is any significant delay in those.

Senator WATT: $10 million a year?

Senator Canavan: As I mentioned, there is a time period between projects of this size getting their finance sorted—and in some cases the NAIF is just one aspect of their finance; they sometimes have to secure finance from other sources—and reaching the final investment decision process and then going into construction. That does take some time with projects of this size. I think the periods we're seeing on projects like Onslow and the Humpty Doo farm that you were at recently are not unusual for projects of this size. We have had some hold-ups with approval at the state government level as well. That has affected only a couple of projects. We're getting better processes in place there as well so we get speed to markets.

Senator WATT: How much in total has been spent on salaries and bonuses for directors and staff since the NAIF was created four years ago?

Senator Canavan: It's all outlined in the annual report, but we can probably provide some figures.

Senator WATT: Do you have that figure handy?

Senator Canavan: Just to clarify: it was all salaries—

Senator WATT: Salaries and bonuses for NAIF employees, senior executives and directors.

Ms Walker: That is in the annual report. So the executive reporting—

Senator WATT: What's the most recent annual report?
Ms Walker: The 2018-19 report. These are all set out on page 58 for the directors—

Senator Canavan: Obviously, we'll have figures for salaries. We might take it on notice.

Senator WATT: Yes, I don't know that the annual report quantifies salaries and bonuses for employees.

Senator Canavan: It would probably in the income statement, but it will be employee expenses.

Senator WATT: If you could take that on notice for me.

Senator Canavan: We'll separate those out.

Senator WATT: Minister, you'd be aware that not a single project in your and my home state of Queensland has yet drawn down funds from the NAIF. When can we expect to see the first Queensland project actively have some funds?

Senator Canavan: We are expecting the drawdowns to begin on the Queensland Airport Ltd project, the Townsville upgrade, later this year. I think that would be the first. We're also expecting the Signature Onfarm Project early next year—

Senator WATT: To have draw down?

Senator Canavan: To draw down. Genex, the pumped hydro project, early next year as well—

Senator WATT: What are you reading from?

Senator Canavan: James Cook University next year as well.

Senator WATT: Could you table the information that you're reading from?

Senator Canavan: I can't table this, because there possibly is some information here that is commercial-in-confidence, but I'll take on notice to provide you with the project-by-project drawdown profile.

Senator WATT: Okay. I want to focus a little bit on some of the projects in Western Australia. I noticed, Minister, on 19 September that you issued a media release announcing funding for the first substantially Indigenous owned iron ore project. It seemed like a very worthy project, but I do not know a huge amount about it. I noticed towards the end of that press release—this was the one from 19 September—that you went through the value of the investment decision and said:

NAIF has now approved loans to six projects in Western Australia, to a total value of $307.8 million. Would you mind taking us through each of those six projects and their dollar value.

Senator Canavan: I will ask officials to do that. I am relying on their input.

CHAIR: While as a Western Australian I celebrate this, could we get this taken on notice or do you need it right now?

Senator WATT: It is relevant to the next set of questions.

CHAIR: Okay.

Ms Bellettini: Those projects would include the Onslow project, for a NAIF loan of up to $16.8 million. It will involve the—

Senator WATT: I do not need to get details of the project, just the headlines. So it is Onslow Marine Support Base—
Ms Bellettini: There's the Pilbara Minerals project, which is for a loan of up to $19.5 million. That project will not proceed to financial close. The Sheffield Resources project has a NAIF loan of up to $95 million. The Alinta project has a NAIF loan of up to $90 million. The Kalium Lakes project has a NAIF loan of up to $74 million. And the Australian Aboriginal Mining Corporation project has NAIF loan of up to $12.5 million.

Senator WATT: Thanks for that. I notice that on the NAIF's website there are 10 projects listed as case studies of projects reaching the investment decision and execution stage. I checked the website again this afternoon and its continuing to refer to the Pilbara Minerals Ltd project as a case study of a project reaching investment decision. But, as you just mentioned, that project's not proceed to financial close. I take it that it's fallen over or been postponed. Is there any reason the NAIF is still promoting that as one of the case studies for a project that is going ahead by reaching investment decision?

Ms Bellettini: There will be information on the NAIF website providing a case study of the investment decision made by NAIF, but that case study does include reference to the fact that that project is no longer proceeding in this current form.

Senator Canavan: I will just add—and this might go to the next question—one of the reasons that the NAIF has developed case studies, which I think some similar organisations have done, is to try to provide prospective proponents with examples of the types of projects that have been successful and how they have been successful. So even though—

Senator WATT: Why is the NAIF continuing to promote a project as a case study if it's actually not going ahead?

Senator Canavan: Because, even though it is not proceeding, at the proponents' request, its success in meeting the NAIF's guidelines of reaching investment decision stage still has instructive merit for other proponents who might have similar projects.

Senator WATT: But why wouldn't you, in that case, put up other projects that aren't going ahead as case studies?

Senator Canavan: We try to be as comprehensive as we can. As Ms Bellettini mentioned, we mentioned in that case study that the project's not proceeding.

Senator WATT: Is it because the NAIF has released so few funds that you have to be continuing to promote projects that actually aren't going ahead?

Senator Canavan: No, I have outlined why those case studies have been done.

Ms Reinhardt: The case study is very clear on the web that it is not proceeding to financial close.

Senator WATT: Not on the web page about case studies. If you go to look into details about that particular project you can find it down the bottom, but, if an observer just goes to the case studies website, it is listed there along with nine other projects.

Ms Reinhardt: The website I'm looking at does have that, but we can check that again. The other thing that is worth noting about this particular project that you referred to as 'falling over' is that, in fact, this project is going ahead. The NAIF was funding a part of the project, which was the road, but while the NAIF is no longer funding the road it's in discussions with the company about other potential support it can offer around that project. The interaction with that proponent is not finished. On the interactions over this particular loan around a road,
while the road won't go ahead the interactions were very positive. It is informative for other potential investors to know how the NAIF operates. It is a message that the NAIF has got from—

Senator WATT: Thanks, but we only have half an hour to go. What date was the NAIF informed that Pilbara Minerals—

CHAIR: We still have another witness. Is there anything that you could put on notice?

Senator WATT: There is plenty I could put on notice, but I have had about 10 minutes and I have been waiting quite a long time while other senators have had a pretty good go. Can I have five more minutes, please?

CHAIR: Okay.

Senator WATT: What date was the NAIF informed that Pilbara Minerals Ltd was not proceeding with its NAIF loan?

Ms Walker: We'll take that on notice, but my recollection is it was in this financial year. We made it very clear in our corporate plan that was released that that project was at the request of the borrower not going to proceed in its current form. We've made that very clear in the annual report in a number of—

Senator WATT: Thank you. What date was the minister informed that Pilbara Minerals would not be proceeding with its NAIF loan?

Senator Canavan: I'll have to take that on notice.

Senator WATT: Was the NAIF or the minister informed before 19 September, when the minister announced the funding for—

Senator Canavan: I'll have to take that on notice. Although I will just point out that, from what you read out from the statement before, investment decisions have been made to that amount, so that's still the case; that's still accurate.

Senator WATT: Even though there's a project that isn't proceeding with the NAIF loan, you're still claiming it as one of your approved projects in your press releases.

Senator Canavan: It's still an investment decision of the NAIF; it's an accurate statement.

Senator WATT: You're out there talking about the successes of the NAIF by claiming projects and loans that are not going ahead as achievements.

Senator Canavan: It's still a project that's reached the investment decision stage. The statement in the media release is perfectly accurate.

Senator WATT: Don't you think it would be more honest to tell people about the number of loans that are actually proceeding? Why not tell people about ten other loans that are proceeding?

Senator Canavan: I think we're really starting to split hairs here. It's an accurate statement—

Senator WATT: No. I'm just trying to get you to tell the truth in your press releases.

Senator Canavan: As I said, it is accurate, so it's certainly the truth.

Senator WATT: So it's okay to go out and inform the public—

CHAIR: Senator Watt, it's been asked and answered. Let's move on.
Senator WATT: You think it's okay to issue press releases that pass off projects and loans that are not actually going ahead as successful NAIF loans?

Senator Canavan: When I'm describing the investment decisions of the NAIF, I'll include all the investment decisions of the NAIF, which is what that media release does.

Senator WATT: Again, do you have to do this because the NAIF has so little to show for after four years?

Senator Canavan: I completely reject that premise. As I've mentioned a number of times—

Senator WATT: You've released 40-odd million dollars after four years.

CHAIR: Senator Watt, allow the minister to finish.

Senator Canavan: I think we're starting a debate and there are other opportunities for that in this place. But, as I said, it's been incredibly successful over the past 12 months. The release that you're referring to is a great project involving what we think is the first iron ore mine owned by an Indigenous corporation, and it probably wouldn't have happened without the NAIF. It's a great development, and there's a lot to celebrate from developments—

Senator WATT: You also said in this press release that more than 1,300 jobs will be created across these six projects in WA during construction and operation. Are you also claiming jobs for projects that actually won't be funded by the NAIF?

Senator Canavan: We'll take that on notice and come back. I don't know exactly with the figures in front of me. I'll also say that the Pilbara Minerals project is still proceeding. Ms Walker?

Ms Walker: I was just going to clarify that the numbers in the opening statement do not include Pilbara Minerals.

Senator WATT: Only the ones in the minister's press releases to the public.

Ms Walker: I'd need to look at that, but the numbers—

Senator WATT: How many other projects which have been approved by the NAIF are also in danger of falling over or not taking up their NAIF loan?

Ms Walker: At the moment the expectation for all the projects that we've identified, other than Pilbara Minerals, is that they will close. There is always risk around projects, but we are expecting these will all move to close.

Senator WATT: So there is a risk that some of the other investment decisions made by the NAIF may also not proceed?

Senator Canavan: There's a risk the sun might not come up tomorrow, so there's a risk.

Senator WATT: I wouldn't make light of it, Minister. You're the one out there trying to claim jobs that you're actually not supporting for projects you're not funding.

CHAIR: Senator Watt, can we move on?

Senator WATT: The minister's trying to make light of this. These are public funds.

I'm not going to have time to explore this in much detail, but one of the other significant criticisms of the NAIF has been its lack of transparency. There's a pretty scathing Auditor-General's report that was handed down earlier this year with a series of recommendations to
improve transparency. Yesterday, the government responded to a Senate inquiry which recommended improved transparency, and all of those recommendations were rejected by the government.

**Senator Canavan:** Just to be clear, we didn't reject all the recommendations.

**Senator WATT:** The recommendations regarding transparency were rejected.

**Senator Canavan:** But not all the recommendations.

**Senator WATT:** Why do you continue to not want to be more transparent about the NAIF?

**Senator Canavan:** Well, I reject that characterisation.

**Senator WATT:** The Auditor-General's found that.

**Senator Canavan:** I reject the characterisation of the Auditor-General's report as well. The Auditor-General's report found that the NAIF did have effective governance arrangements in place. It also recommended that a number of improvements could be made. The government has accepted all those recommendations. We have not accepted some of the Senate inquiry's recommendations, primarily because the recommendations you're referring to would have been imposing greater conditions on the NAIF than like bodies. We spent a lot of time thinking about how the Northern Australia Infrastructure Facility should be accountable to the parliament and transparent. I think it is incredibly accountable and transparent, along with other, similar organisations, like the Clean Energy Finance Corporation and the Export Finance and Insurance Corporation. So, we did not see a need to go beyond the normal arrangements that are in place for those organisations that work effectively.

**Senator WATT:** Last question: how can we have confidence in the closed-door processes of the NAIF, given its lack of transparency, especially when at least one investment decision is now not proceeding?

**Senator Canavan:** As I said, I think a lot of the content of your question is assertion, not really a question. I don't accept that there's a closed-door policy. There's a great degree of—

**Senator WATT:** It's hardly a transparent body, though, is it?

**Senator Canavan:** Well, I'm sorry, Senator, but I reject that characterisation. It's incredibly accountable. The decision you referred to in your question was publicly released very soon after the decision. We'll get you the precise dates. It appears at this estimates regularly. It is a subject of the Freedom of Information Act as well. So, I don't accept that there's not a great degree of transparency—if not more, in some instances—as the Export Finance and Insurance Corporation and the Clean Energy Finance Corporation.

**Senator WATT:** I'll put some more questions on notice.

**CHAIR:** I thank the witnesses. You go with our thanks.

**Senator Canavan:** I might just take the opportunity to recognise Mark Coffey. This is also his last estimates. Mark was the inaugural head of the Office of Northern Australia, based in Darwin, and is moving on to other things. I just want to place on record my thanks to Mr Coffey and all the work he's done in establishing the government's Northern Development Agenda.
CHAIR: Thank you, Mr Coffey.

National Offshore Petroleum Safety and Environmental Management Authority

CHAIR: Welcome. I'm not even going to ask you whether you've got an opening statement! We've got very limited time. I'm happy for you to table a document if you've got it.

Senator HANSON: I spoke earlier about the field of WA-18-L off Timor and the agreement there. To go into details for those who are listening to the broadcast, they're at the Northern Endeavour. It's a ship that was built in 1998. I have a picture here of it. It's a floating production, storage and offloading ship moored in the Timor Sea, 500 kilometres north-west of Darwin and 150 kilometres south of Timor. The Northern Endeavour was surveyed in July 2018. Lloyd's Register International issued an appropriate class certificate in February 2019. Lloyd's had been the certifier since the ship was built. All previous surveys were with Lloyd's, which was the basis of obtaining class certification from Lloyd's. The total cost of obtaining a class certificate for the Northern Endeavour was around $10 million. Lloyd's class certificate was the basis for the valuation of $150 million, and that in turn was used by the maritime insurance company and the lender. I have here the class certification and can table it. Under that it states that the cargo tank surveys are to be carried out as per the approval of the RBI plan RV3. Would you like to explain what that means, and to what specifications?

Senator Canavan: I will have to ask the officials.

Senator HANSON: I just want to let you know that I have a number of questions here and other senators are waiting, so I want the answers to be brief, please, and to the point. Thank you.

Mr Smith: I will hand that to Mr O'Keeffe, the head of safety.

Mr O'Keeffe: RBI is risk based inspection, and the basis of it is to assess the condition of a piece of equipment to determine what the risks are, and then to set a future inspection schedule based on the condition of that equipment.

Senator HANSON: Right. So it is the full inspection. That was certified from 24 July 2018 until 23 July 2023. So it has been certified for that period of time. In mid-May of this year, NOPSEMA raided the Perth offices of Lloyd's Register International. We understand NOPSEMA was only really interested in the records relating to Northern Endeavour. The NOPSEMA audit of Lloyd's finished on 9 August 2019, after three months of inspection. I'd like to know: how many times have you used a warrant to access records at Lloyd's or any other classification society?

Mr O'Keeffe: This is the first time we've used a warrant to access records. We do it because of the particular arrangements that relate to Lloyd's as a service provider as compared to a title holder or an operator.

Senator HANSON: Why was only the Northern Endeavour picked out?

Mr O'Keeffe: That's not correct. We have identified a number of vessels and we've looked at a number of them in sequence—

Senator HANSON: My understanding is that on this occasion, when the warrant was issued, you weren't interested in any other ships, only the Northern Endeavour.
Mr O'Keeffe: That's not correct, Senator. We were interested in a number of vessels, all covered by Lloyd's.

Senator HANSON: Can you name those vessels?

Mr O'Keeffe: I will do it from memory. There was the—

Senator PATRICK: The Montara Venture.

Mr O'Keeffe: Thank you, Senator.

Senator PATRICK: The Pyrenees—

Senator HANSON: Senator, can I please have the answer?

Senator PATRICK: He was struggling, I thought.

Senator HANSON: Thank you.

CHAIR: Can we try and get back to questions and answers, please?

Senator HANSON: I want you to answer the question, please.

Mr O'Keeffe: We looked at the Montara Venture—

Senator HANSON: These were the ones on the day you raided the offices in May?

Mr O'Keeffe: First of all, we didn't raid anyone's office.

Senator HANSON: A warrant was issued for the raid on the office.

Mr O'Keeffe: A warrant was issued to allow us to conduct an inspection at the office of Lloyd's Register.

Senator HANSON: And that warrant was to cover what ships?

Mr O'Keeffe: It was to cover a number of ships that we wanted to look at in relation to overall compliance relative to what work Lloyd's had been doing in terms of certification.

Senator HANSON: Can you give me the names of those ships.

Mr O'Keeffe: I will take the full list on notice. Sorry, I haven't got them here. We call them facilities, not ships. I can take on notice—

Senator HANSON: The oilers or whatever you want to call them. So you will take on notice?

CHAIR: Have you taken it on notice?

Mr O'Keeffe: I will take the list on notice. There was a series of vessels we looked at.

Senator HANSON: Can you provide the warrant that was issued?

Mr O'Keeffe: We'll provide the warrant.

Senator HANSON: So the raid happened, and that was in May. During that time, the Northern Endeavour self-reported an incident that occurred around 30 June 2019, which involved the finding of a four-kilo object on the deck. No-one had seen the object fall and there were no marks and no damage to the deck. But it was after that, on 10 July, that a certificate was issued from NOPSEMA for a prohibition notice. Are you aware of that?

Mr O'Keeffe: Yes, I am, Senator.

Senator HANSON: Just explain: what is a prohibition notice compared to an improvement notice?
Mr O'Keeffe: In simple terms, a prohibition notice requires a particular activity to be suspended at that particular time. An improvement notice typically identifies a risk that can be addressed over a period of time.

Senator HANSON: Because they self-reported this four-kilo object falling down, you have given them a prohibition notice. On what grounds?

Mr O'Keeffe: The grounds were that there was severe corrosion on the facility. An object was found reported on the deck there. That related to us carrying out an inspection, where we determined there was excessive corrosion in a number of places there. We required the facility to be made safe until the work could be addressed.

Senator HANSON: So you personally carried out an inspection on the ship?

Mr O'Keeffe: I didn't personally carry out an inspection. My officers—

Senator HANSON: But you will say that someone went out and personally carried out an inspection?

Mr O'Keeffe: I'll have to take that on notice as to precisely what occurred and when.

Senator HANSON: The report says:

… a NOPSEMA inspector appointed under section 602 of the Act, am satisfied on reasonable grounds that:

… … …

an activity may occur at the facility that, if it occurred, would involve an immediate threat to the health or safety of a person.

Now, they self-reported four-kilo object, and I'm saying that you never went out there and did an inspection on that ship. You've given them a prohibition notice, which says, 'if it occurred'.

CHAIR: The official has taken that on notice.

Senator HANSON: It is quite interesting. This happened on 10 July. They self-reported on 30 June. NOPSEMA, on 1 July, was notified of a dangerous occurrence under regulation, and so on, which described a dropped object of sufficient height and weight to cause a fatality. Then we have, the day after, on 11 July, 'NOPSEMA shuts down'—it's a drilling production; it's the Oil & Gas Journal. The day after this prohibition notice, they say:

… on July 1 of a dangerous occurrence that described a dropped object of sufficient height and weight to cause a fatality.

Exact words—the exact words that are in your letter here are in a journal the next day. How can you answer that?

Mr O'Keeffe: If I can explain: it's a requirement that, when we issue a notice, it must be published immediately on the facility to which it relates. There were a number of people out there. Once we've done that, if a member of the staff or the people out there choose to put that out, that is not within our control. What we do—

Senator HANSON: Within 24 hours? A magazine comes out within 24 hours of a notice being handed out.

CHAIR: So the notice is given to the ship, so someone could take a photograph of it.

Mr O'Keeffe: It's quite feasible, and it happens quite often; when we do things, the word moves very, very fast.
Senator GALLACHER: That's a good thing, isn't it?

Mr Smith: And, as a matter of course, we will publish notices anyway, but we do give the company an opportunity first to address the issues before we will publish it. But it is still made available to the workforce and could have been released by any of those workforce members or the company itself—a range of different sources.

Senator HANSON: Well, I'm actually—

CHAIR: Senator Hanson, I will have to give Senator Patrick time.

Senator HANSON: saying that NOPSEMA did not go and inspect the *Northern Endeavour* but relied on a desktop calculation that showed, if the four-kilo object had fallen from a height of four metres onto an unprotected head, then there would have been a fatality.

CHAIR: Senator Hanson, they have taken that issue on notice and will answer it.

Mr Smith: Can I make a couple of points here that may be relevant. The company did self-report. It is required to do so, so it shouldn't be a surprise that they self-reported such things. And the matter was the subject of an inspection by NOPSEMA, which preceded our decision to issue a prohibition notice.

Senator HANSON: You could have actually given an improvement notice rather than a prohibition, which shut down the company.

Mr Smith: We—

Senator HANSON: You could have done, because they've just spent $10 million, and $6 million of that—

CHAIR: Senator Hanson, give the official a chance to answer.

Senator HANSON: actually went into emptying out the tanks so they were fully inspected—

CHAIR: Senator Hanson! Order! You asked a question. Allow the official to answer.

Mr Smith: Senator—

Senator HANSON: I have asked the difference between it. They want to shut down with a prohibition notice. The difference is that—

CHAIR: Senator Hanson, you're running out of time.

Mr Smith: We did have the option of issuing an improvement notice rather than a prohibition notice. If we didn't think there was an immediate threat to the safety of the workforce, we would have considered an improvement notice more closely. At the time we were—and in hindsight we still are—of the view that there was an immediate threat to the safety of the workforce which meant that an improvement notice was not going to be an appropriate course of action and a prohibition notice was the appropriate tool to use. We stand by that.

CHAIR: This is the last question, Senator Hanson.

Senator HANSON: Then on 11 July, the same day the article came out, the day after you gave one to NOPSEMA about the *Northern Endeavour*, you applied an improvement notice. A lifting related incident occurred on 6 June, and the incident occurred during the lifting of a two-tonne load off a supply boat, where tonnage came down. You gave them an improvement notice, yet on the other one you gave them a prohibition notice.
Mr Smith: Correct.

Senator HANSON: Please explain that one.

Mr Smith: The prohibition notice for the *Northern Endeavour* related to more than just the dropped object. The details of that are contained in the prohibition notice. The other matter that you're referring to, where an improvement notice was issued, reflects the different circumstances in that, where there was not an immediate threat to the safety of the workforce on that facility, so a prohibition notice was not warranted. In fact, an improvement notice was the appropriate tool in that particular situation.

Senator HANSON: Would you supply—

CHAIR: Senator Patrick, you have the call.

Senator HANSON: Can I please—

CHAIR: Sorry, Senator Hanson; you've had more than half of the remaining time.

Senator HANSON: Unless he'd like to give the time to me.

CHAIR: Unless Senator Patrick cedes the time, absolutely.

Senator PATRICK: I do want to ask a couple of questions here. Firstly, to the minister: can you confirm—and no doubt you'll have to do this on notice—that one of your officers, Ms Schofield, passed to a Timorese official a copy of the prohibition notice? If that occurred, why did she choose to do that?

Senator Canavan: I'll have to take it on notice, but I would just put it in the context that, as Mr Smith has indicated, prohibition notices are published on NOPSEMA's website.

Senator PATRICK: I understand that, and of course people can access that, but I wonder why an Australian official, if indeed it occurred—

Senator Canavan: I'm taking it on notice. I'm not confirming or denying it. I don't have knowledge of it. I'll take it on notice.

Senator PATRICK: The question is: if that was the case, why? Obviously there were some safety concerns with this vessel, and I understand the processes that you go through. This company is now in administration. It's a fairly significant capability that I'd hate to see Australia lose. There is a risk of going into liquidation. In terms of audits and inspections—which I've done throughout my life, in various engineering tasks—normally you walk away, exit, with a strategy to get back into operation. Have you provided the company with a definitive statement that says, 'If you do these things, we will be in a position to grant you the ability to continue operations'?

Mr O'Keeffe: No. We don't do that. The company provides to us a safety case, in which they say, 'We will do the following to maintain the facility and the people and everything in a state of good order and safe operation.' If they fail to do that in certain areas then we expect them to meet the requirements under the safety case, which is to reduce risk to as low as reasonably practicable. When we identify areas of defect, we'll bring this to the company's attention, normally through recommendations initially, and then we escalate that up through enforcement. I can draw a parallel to a case in November of last year, the *Montara Venture*, PTTEP. There were some defects there not dissimilar, in terms of corrosion and severe corrosion in certain areas there. They were shut down for 10 weeks while they addressed it. It was an open-ended time frame. We said we needed to be satisfied that they could operate the

ECONOMICS LEGISLATION COMMITTEE
vessel properly. At the end of 10 weeks, they were able to demonstrate that. So, no, we didn't set a scope. We didn't set a time frame. They put people on it, they addressed our concerns, and we were satisfied it could start up again.

In the case of the *Northern Endeavour*, there was a scope of work which had built up over a period of time. On 18 July, I believe, we published a notice where we said there were 118 backlog defects there, so that was a measure of the issues that had built up. Again, corrosion was an issue. We asked for the corrosion to be addressed. That goes to the operator of the facility to address that in the time frame that they deem fit with the resources they deem fit.

**Mr Smith:** Just to clarify, the operator in this case is a company called UPS rather than NOGA.

**Senator PATRICK:** Yes, I understand. There are a number of other vessels that we talked about before, one of them the *Montara Venture*, which I believe is older than *Northern Endeavour*. Are there any of those other vessels that were involved in respect of Lloyds? You clearly had an issue with Lloyds.

**Mr O'Keeffe:** May I respond to that: we've looked at a number of classification societies. The first one we looked at was Lloyds, but we have a general concern about what classification actually means in terms of the way that risks are identified and mitigated. We don't have an issue with any one company; we were looking at the overall spectrum of how classification is done.

**Senator PATRICK:** The dominant finding in here was that you weren't satisfied with the way in which Lloyds had carried out the certification. That's a summary of the finding. So my question goes to all of the other vessels that have been certified—so *Montara Venture*, *Prelude* and *Pyrenees Venture*. Can you provide the committee with details of inspections that you have carried out on those vessels since the warrant was executed and the details of any actions that have been taken? I'd like to know the type of inspections that have been taken, how many people went on board, the dates and the outcomes of those other inspections for each of the other vessels that that were of concern in respect of certification.

**Mr O'Keeffe:** Senator, I can respond to the thing about the report that you referred to there. We identified that the processes and procedures that Lloyds had in place were not necessarily followed in the course of their inspections. There was a gap there. We don't know what the consequence of that is, so we've now gone back to the operators of the vessel and said: 'There is a gap in that. You're using it as a means of demonstrating that risks have been managed. What are you now doing about the gap in that space?' We've given a reasonable period of time in which to respond to that.

**Senator PATRICK:** Are you talking about Lloyds?

**Mr O'Keeffe:** We've gone to Lloyds and to NOGA, the owners of the *Northern Endeavour* vessel.

**Senator PATRICK:** No, I'm interested in what you've done in respect of the other vessels.

**Mr O'Keeffe:** On the others, the inspections are still open.

**Senator PATRICK:** I'm happy for you to take them on notice.

**CHAIR:** Perhaps, in the interests of time, that question can be taken on notice.
Mr O'Keeffe: We'll take it on notice.

Senator PATRICK: Thank you. I have one more question to the minister. Minister, there's a fairly significant Australian company and there are a range of jobs. I understand the safety related aspects of this.

Senator HANSON: There is over $320 million in taxes where you can't get any taxes out of a foreign company, Chevron.

Senator PATRICK: There are significant issues. They've got a presence on Timor, which is a good thing. All of this is at risk. Looking at what I was talking about before in terms of a mechanism to assist this company to get to a point where they understand what it is they need to satisfy the Australian regulators that they will be able to proceed—

Senator HANSON: What's going to happen to the licence?

Senator Canavan: As has been outlined here, the actions that needed to be taken by the operator, UPS, on behalf of NOGA had been outlined in detail. I'm confident with the regulatory action that NOPSEMA has taken. This does prove, as you often express, the need to have a robust and rigorous assessment process.

Senator PATRICK: I'm not questioning that. I'm talking about an exit path.

CHAIR: Senator Patrick, allow the minister to finish.

Senator Canavan: Obviously our primary concern is to ensure the safety of workers and also, of course, to protect the broader environment. I'm confident that NOPSEMA has done everything it can to do that. In terms of those other questions—

Senator HANSON: I think it's important to know what happens to the licence if this goes into liquidation?

CHAIR: Senator Hanson, Order!

Senator HANSON: Where does the licence go and what happens to it? If it goes into liquidation, what happens to the licence?

CHAIR: Senator Hanson, allow the minister to answer the question. The minister will conclude.

Senator Canavan: That will depend on the circumstances of that. That will go more to NOPTA and NOPSEMA, who appeared earlier, but we're discussing all contingencies with the industry as well. This is an unfortunate situation, but we must protect lives, protect workers and protect our natural environment.

CHAIR: On that note, it being—

Senator PATRICK: No, Chair, you can't do that. We haven't finished. I remind you of standing order 26(4).

CHAIR: And I'll remind you of the standing orders.

Senator PATRICK: Under 26(4) you cannot—

CHAIR: There are provisions—

Senator PATRICK: We can go into spillover, if you want to. Just give me a couple of minutes.
CHAIR: No. We're going to have to have a private meeting, Senator Patrick, because otherwise—

Senator GALLACHER: Give him two minutes.

Senator PATRICK: I'm just saying, give me a couple of minutes.

CHAIR: Two minutes.

Senator PATRICK: Minister, when we were talking with NOPTA before, I asked a question about what happens in the circumstances where the company is liquidated. Who becomes responsible for the shutdown of the operation? Are you prepared to answer that now?

Senator Cormann: I'll ask officials to say what they can. As I mentioned earlier, we've been briefed on the potential options that would be available, but, Mr Smith, is there anything you want to add?

Mr Smith: Our interest is in ensuring that safety and the environment is protected. Actions have been taken, such that the facility is now in a state where the key risks have been addressed for it to exist without it producing. Things like the wells have been shut down—

Senator PATRICK: No. The burden of my question is not about that. What happens if they go into liquidation, so the asset has to be sold off or the company is not able to operate? How do you deal with the shutdown of the company and the safe shutdown of the facility?

Senator HANSON: Who's going to cap it? Who's going to clean up the environment?

Mr Smith: So, who will be the title holder?

Senator PATRICK: No. How will you—who will be the title—

Mr Smith: We're in a position where we can take action against the title holder or an operator.

Senator PATRICK: Even if they're in liquidation? Even if they're bankrupt?

Mr Smith: If they're the title holder or operator—

Senator PATRICK: The taxpayer now bears the cost. That's ultimately what you're saying is going to happen?

Senator HANSON: It's going to cost about $100 million to cap that, if you take it over. So instead of issuing him—

Mr Smith: We won't be taking anything over. That's not our role.

Senator HANSON: Are you going to sell the licence once it gets in your hands? Do you want to sell it to someone else?

Senator PATRICK: Perhaps take that on notice.

Senator Canavan: I'll take that on notice.

Senator PATRICK: A detailed description.

Senator Canavan: I've been briefed on it. I've discussed the matter with the broader industry as well.

Senator PATRICK: So you're anticipating it.
Senator Canavan: If it happened, in this regard, we'd obviously seek to involve the broader industry to make sure we protect the natural environment and keep the safety of anyone working on it paramount.

Senator PATRICK: Did those discussions include discussions with Woodside?

Senator Canavan: I'm not going to go into detail, but I'll take it on notice and provide what I can.

Senator PATRICK: Thank you.

CHAIR: On that note, that concludes the committee's consideration of the Senate Economics Legislation Committee 2019 supplementary budget estimates. I thank Minister Canavan, the Department of Industry, Innovation and Science and all witnesses, including NOPSEMA, who have given evidence to the committee today. It was a lively end to a very interesting day. I also thank Hansard, broadcasting and the secretary.

Committee adjourned at 11:03